

SERVICE MANUAL

US Model Canadian Model



Video 8 PRO

SPECIFICATIONS

System

Video recording system

Rotary two-head helical scanning

Helical scaning FM system

Audio recording system

Normal recording

Standard: Rotary head FM system

(monaural)

PCM: PCM system (2 channels)

Digital multi audio recordina

PCM system (2 channels, 6 tracks)

Video signal

Usable cassettes

Tape speed

NTSC color, EIA standards 8 mm video system cassette

SP: Approx. 1.43 cm/sec.

LP: Approx. 0.72 cm/sec.

Maximum recording time

SP: 2 hours

LP: 4 hours

(with Sony E6/P6-120 cassette)

Fast-forward and rewind time

Approx. 2 min. 30 sec.

(with Sony E6/P6-120 cassette)

Tuner section

Channel coverage

VHF channels 2 to 13

UHF channels 14 to 69

Cable TV channels 1 to 125

VHF/UHF output signal

Channel 3 or 4 (selectable)

75 ohms, unbalanced

VHF/UHF input signal

75-ohm antenna terminal for VHF/UHF

PCM digital multi audio system

Sampling frequency

Audio frequency

Dynamic range Wow and flutter

20 Hz to 15 kHz More than 90 dB

Less than 0.005% RMS

Inputs and outputs

Video input

LINE IN 1/2 VIDEO (phonojack)

(1 each)

31.5 kHz

Input signal: 1 Vp-p, 75 (hms,

unbalanced, sync negative

S VIDEO input

LINE IN 1 S VIDEO (4-pin, mini-DIN)

Luminance signal: 1 Vp-1, 75 ohms, unbalanced, synchegative

Chrominance signal: 0.28 Vp-p,

75 ohms, unbalanced

Audio input

LINE IN 1/2 AUDIO (phonojack)

(2 each)

Input level: -7.5 dBs (0 (Bs=

0.775 Vrms) Input impedance: more tian 47

Video output

kilohms

LINE OUT 1/2 VIDEO (phon jack)

(1 each)

Output signal: 1 Vp-p, 750hms,

unbalanced, sync negative

- Continued of mext page -

Hi8 stereo video cassette recorder SONY



S VIDEO output

LINE OUT 1 S VIDEO (4-pin, mini-

DIN) (1)

Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative Chrominance signal: 0.286 Vp-p,

75 ohms, unbalanced

Audio output

LINE OUT 1/2 AUDIO (phono jack)

(2 each)

Standard impedance: -7.5 dBs (327 mV) at load impedance 47

kilohms

Output impedance: less than 10

kilohms

CONTROL L CONTROL S IN

CONTROL S OUT

5-pin DIN Minijack Minijack

Minijack (2)

-60 dBs. for low impedance

microphone

HEADPHONES jack

Stereo minijack, -20 dBs, 8 ohms

Timer

MIC input

Clock

Time indication Timer setting

Crystal lock 12-hour cycle Only for recording

6 events (3 weeks max. adjustable

for any day or for all 7 days of the

week)

General

Power requirement

120 V AC, 60 Hz

Power consumption 33 W

AC outlet Max. 400 W (unswitched)

Operating temperature

5°C to 40°C (41°F to 104°F)

Storage temperature

-20°C to +60°C (-4°C to +140°F)

Dimensions

Approx. 470 × 97 × 334 mm $(18^{5}/8 \times 3^{7}/8 \times 13^{1}/4 \text{ inches})$ including projecting parts and

controls

Weight

Approx. 8.6 kg (18 lb 15 oz)

Accessories supplied

Antenna connector (1) 75-ohm coaxial cable (1) Audio connecting cord (1) S VIDEO connecting cord (1)

Video connecting cord (1)

Remote Commander RMT-424 with 3 size AA (R6)

batteries (1) Cleaning cassette (1)

Remote Commander

Remote control system

Infrared control

Power consumption

4.5 V DC, 3 size AA (R6) batteries

Dimensions

Approx. 105 × 40 × 160 mm $(4^{1}/10 \times 1^{1}/2 \times 6^{1}/4 \text{ inches})$

Weight

Approx 220 g (8 oz) without

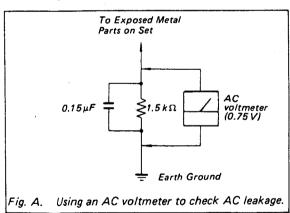
batteries

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

- Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
- 2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
- 3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
- Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
- Check the line cord for cracks and abrasion.
 Recommend the replacement of any such line cord to the customer.
- 6. Check the B+ voltage to see it is at the values specified.
- Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.



SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK

NON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UN TRAME ET UNE MARQUE À SUR LES DIAGRAMMES SCHÉMATIQUES, LES VUES EXPLOSÉES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS MANUEL OU DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DU CIRCUIT QUI SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT SONT IDENTIFIÉS DANS CE MANUEL. SUIVRE LES PROCÉDURES QUAND LES COMPOSANTS CRITIQUES SONT REMPLACES OU LE FONCTIONNEMENT IMPROPRE EST SUSPECTÉ.

TABLE OF CONTENTS

| Sect | ion <u>Title</u> | <u>Page</u> | Sect | ion | <u>Title</u> | <u>Page</u> |
|--------|---|-------------|-------|-------------------------------------|---|------------------|
| SER | VICE NOTE | 7 | 3. | DIAGRAMS | | |
| | | | 3-1. | Circui Boards Locat | tion····· | 40 |
| 1. | GENERAL | | 3-2. | Overall Block Diagra | am | 41 |
| | | | 3-3. | Video Block Diagra | m ····· | 46 |
| Hi8 (H | High Eight) Video System ······ | 8 | 3-4. | Servo Block Diagra | m · · · · · · · · · · · · · · · · · · · | 51 |
| | ion and Function of Parts and Controls | | 3-5. | | gram | |
| | ling the Cassette ······ | | 3-6. | System Control \ | Video Block Interface ··· | 59 |
| | ng Back a Tape ······ | | 3-7. | System Control | | |
| | us Playback Modes····· | | | Servo (Caps | stan Motor) Block Interfa | ace 59 |
| | the Tape Counter ······ | | 3-8. | System Control | | |
| | rding TV Programs······ | | | — Servo (Drum | Motor) Block Interface | 59 |
| Timer | -Activated Recording | 16 | 3-9. | System Control | | • |
| PCM | Recording and Playback | | | - Servo (Reel | Motor) Block Interface | 61 |
| _ | Digital Multi Audio System | 18 | 3-10. | System Control | | |
| | ave the Unit Turned Off Automatically | | | - Servo (ATF | Servo) Block Interface · | 61 |
| _ | – Sleep Timer····· | 20 | 3-11. | • | Servo (STILL) Block Inte | |
| Index | Function ····· | 21 | | System Control | , , | |
| Trans | ferring the Entire Control of a Tape to Another | 23 | | • | Selecting) Block Interfa | ace 63 |
| | rious Tape Editing Methods | | 3-13. | System Control | 3, | |
| | nronized Editing from/onto a SONY VCR | | | - | Others) Block Interface | 36 |
| - | the Control Terminal····· | 24 | 3-14. | | MD Block Interface ······ | |
| | al Editing from/onto a VCR Not Equipped | | | System Control | | |
| | Control Terminal ······ | 26 | | - | Block Interface (AU-54 i | Board) ······ 67 |
| | natic Assemble Editing | | 3-16. | Pcm Index Controlle | | , |
| | Dubbing | | | | Block Interface····· | 67 |
| | na/Cable and TV/Monitor Connection ······ | | 3-17 | | PCM Audio Block Interfa | |
| | ting the TV······ | | | | ck Interface ····· | |
| | g the Clock ······ | | | | o Block Interface ······ | |
| Octan | g the block | • | | | o Block Interface ······· | |
| | | | | | m ······ | |
| 2. | DISASSEMBLY | | | | n ····· | |
| ۲. | DIGAGGETTEE | | | | iagram····· | |
| 2-1. | Removal of Upper and Lower Cabinets | 32 | 3-23. | Timer/Made Central | Block Diagram ······· | 83 |
| 2-2. | Removal of Front Panel······ | | 3 25 | Power Block Diagra | m ····· | 85 |
| 2-3. | Opening of The FT-37 Board | | 3-23. | Fower block biagra | 111 | |
| 2-4. | Opening of The PW-62 Board ····· | | | | | |
| 2-5. | Removal of The PR-12 Board | | 4. | PRINTED WIRING | 2 BOARDS AND | |
| 2-6. | Opening of The SP-7 Board | | ٦. | SCHEMATIC DIA | | |
| 2-7. | Removal of TS-49 and YU-82 Boards ····· | | | SCHEMATIC DIA | GNAMO | |
| 2-8. | Opening of The VI-57 Board | | 4.4 | Erama Cahamatia D | iagram ······ | |
| 2-9. | Opening of The AU-54 Board | | 4-1. | | | |
| | Removal of The DT-63 Board | | 4-2. | | ds and Schematic Diag | |
| 2-10. | | | | | | |
| 2-11. | Removal of The RP-68 Board | | | | 0.44 NO 0 B | |
| 2-12. | Removal of The DR-35 Board (DS 15 Board) | | | | G-11, NC-8 Boards | 110 |
| 2-13. | , | | | SP-7 (System Co | • | 444 |
| 2-14. | Removal of Rear Panel | | | | | |
| 2-15. | Removal of Mechanism Block | | | • SP-7 (Servo), DN | M-18 Boarsd······ | 130 |
| 2-16. | Removal of LS Cassette Compartment Assembly ····· | | | | -6, LD-1 Boards······· | |
| 2-17. | Ejecting Without Applying The Power | | | • | o) Board ······ | |
| | Replacement of Cassette Holder Assembly | | | | | |
| 2-18 | | | | AD-12, NR-6, MK | (-2, MJ-12 Boards · · · · · | ····· 165 |
| 2-18 | | | | | ••••• | |
| 2-19. | Internal Views ····· | 39 | | | | |
| | , | | | • TS-49, TU-82, Pf | R-12 Boards ······ | 181 |
| | | | | | -39 Boards | |
| | | | | | rds1 | |
| | | | | | '-63, DS-15, DR-35 Boa | |
| | | | 4-3 | Semiconductors | ************************ | |

| Secti | on <u>Title</u> | <u>Page</u> | Section | <u>Title</u> | Page |
|-------|--|-------------|-----------|--|-------------------|
| 5. | EXPLODED VIEWS | | 7-4. Ta | pe Path Adjustment ····· | 299 |
| | | | 7-4-1. | Connection of Track Shift & Monitor Jig | |
| 5-1. | Front Panel and Case Assemblies | 209 | 7-4-2. | Preparation for Adjustment | |
| 5-2. | Power Block and Rear Panel Assemblies | | 7-4-3. | Entrance Side Adjustment ······ | |
| 5-3. | Board Assembly ····· | | 7-4-4. | Exit Side Adjustment ····· | |
| 5-4. | LS Cassette Compartment Assembly | 212 | 7-4-5. | Checking After Adjustment····· | |
| 5-5. | Chassis Assembly 1 ······ | 213 | | | |
| 5-6. | Chassis Assembly 2 ····· | | | 1 | |
| 5-7. | Chassis Assembly 3 ····· | 215 | 8. EL | ECTRICAL ADJUSTMENT | |
| 5-8. | Chassis Assembly 4 ····· | | | | |
| | | | 8-1. Pre | eparations | 311 |
| | | | 8-1-1. | Connection of Equipment ····· | |
| 6. | ELECTRICAL PARTS LIST | 217 | 8-1-2, | Confirmation of Input Signal ····· | 312 |
| | | | 8-1-3. | Recording Mode Selection | |
| HARD | WARE LIST | 262 | | (Hi8 mode/Normal mode) ····· | 314 |
| | | | 8-2. Po | wer Supply Block Adjustment····· | |
| | | | 8-2-1. | Oscillation Frequency Adjustment | |
| 7. | MECANICAL ADJUSTMENT | | | (DR-35 Board) | 314 |
| | | | 8-2-2. | REG 5V Adjustment (DR-35 Board) ······ | |
| 7-1. | Preparation Items for Mechanism Section Chec | king, | 8-2-3. | REG 9V Adjustment (DR-35 Board) | |
| | Adjustment and Replacement | 263 | 8-2-4. | Voltage Check (DR-35 and DT-63 Boards) ····· | |
| 7-1-1 | LS Cassette Compartment Assembly and | | 8-3. Sys | stem Control System Adjustment | |
| | Operation without Tape Inserted | 263 | 8-3-1. | Timer Clock Adjustment (FT-37 Board) ······· | |
| 7-1-2 | 2. Handling of Mode Selector ····· | 264 | 8-4. Sei | rvo System Adjustment······ | |
| 7-2. | Periodic Check and Maintenance | 265 | 8-4-1. | Reel Bias Adjustment (SP-7 Board) | |
| 7-2-1 | . Cleaning of Rotary Drum Assembly | 265 | 8-4-2. | REC ATF Level Check (SP-7 Board) | |
| 7-2-2 | 2. Cleaning of Tape Path ····· | 265 | 8-4-3. | Drum Free Speed Adjustment | |
| 7-2-3 | Cleaning of Drive System | 265 | | (SP-7 Board) | 31 6 |
| 7-2-4 | Periodic Check······ | 266 | 8-4-4. | Capstan Free Speed Adjustment | |
| 7-2-5 | i. Service Jig Table ······ | 267 | | (SP-7 Board) | 31 6 |
| 7-3. | Mechanical Check, Adjustment and Replaceme | nt 268 | 8-4-5. | Switching Position Adjustment | |
| 7-3-1 | • | | | (SP-7 Board) | 31 7 |
| 7-3-2 | S Reel Table Assembly | 269 | 8-4-6. | ATF BPF Balance Adjustment | |
| 7-3-3 | T Reel Table Assembly | 270 | | (SP-7 Board) | 31 7 |
| 7-3-4 | Pinch Press Arm Assembly | 271 | 8-4-7. | SLOW Tracking Adjustment (SP-7 Board) ······ | |
| 7-3-5 | | | 8-4-8. | Tracking Adjustment (SP-7 Board)····· | |
| 7-3-6 | i. Tension Regulator Band Assembly | 273 | 8-4-9. | STILL Adjustment (SP-7 Board) | |
| 7-3-7 | . Threading Motor Assembly | 274 | 8-4-10. | FORWARD SLOW Adjustment | |
| 7-3-8 | . Threading Ring Assembly | 275 | | (SP-7 Board) | 31 8 |
| 7-3-9 | . Pinch Roller Arm Assembly | 277 | 8-4-11. | SLOW fH Adjustment (SP-7 Board) | |
| 7-3-1 | 0. Slant Guide Chassis Assembly | 279 | 8-5. Vide | eo Adjustment ······ | 31 9 |
| 7-3-1 | Entrance Guide Assembly | | 8-5-1. | Playback Frequency Characteristics Adjustmen | |
| | (No. 2 Guide Assembly) ····· | 280 | | (RP-68 Board) | 320 |
| 7-3-1 | 2. L Slider Assembly ····· | 281 | 8-5-2. | Flying Erase Check (RP-88 Board) | 320 |
| 7-3-1 | 3. L-SW Assembly | 282 | 8-5-3. | X'tal Oscillator fo Adjustment | |
| 7-3-1 | 4. Brake Plunger ······ | 284 | | (CH-44/VI-57 Board) | ····· 32 O |
| 7-3-1 | 5. M-SW Assembly ······ | 285 | 8-5-4. | Y/C Separation Comb-type Filter Adjustment | |
| 7-3-1 | 6. M Slider | 287 | | (VI-57 Board) | 32 1 |
| 7-3-1 | 7. Capstan Motor ······ | 289 | 8-5-5. | Y Comb-type Filter Adjustment | |
| 7-3-1 | 8. Replacement of Rotary Upper Drum | 290 | | (VI-57 Board) | 32 1 |
| 7-3-1 | 9. Drum Assembly Replacement | 291 | 8-5-6. | SYNC AGC Adjustment (VI-57 Board) | |
| 7-3-2 | 0. Adjustment after Replacement of | | 8-5-7. | 31 AMP Gain Adjustment (VI-57 Board) | |
| | No. 3 Guide and No. 4 Guide | 293 | 8-5-8. | VIDEO OUT Level Adjustment | |
| 7-3-2 | 1. No. 5 Guide Assembly ····· | 293 | | (VI-57 Board) | 322 |
| 7-3-2 | · _ | | 8-5-9. | PB Emphasis Adjustment (VI-57 Board)······· | - |
| 7-3-2 | | | 8-5-10. | STD Mode PB Y Level Adjustment | |
| 7-3-2 | 4. Check of S and T Main Brake Torques ····· | 296 | | (VI-57 Board) | 312 |
| 7-3-2 | • | | 8-5-11. | Hi8 Mode PB Y Level Adjustment | |
| 7-3-2 | · | | ., | (VI-57 Board) | 33 |
| 7-3-2 | · · · · · · · · · · · · · · · · · · · | | 8-5-12. | STD Mode Y FM Carrier Frequency, | |
| | Winding Torque Cassette | 298 | | Y FM Deviation Adjustment ······ | 3:3 |
| | | | | • | |

| <u>Section</u> | <u>Title</u> | <u>Page</u> |
|----------------|--|-------------|
| 8-5-13. | Hi8 Mode Y FM Carrier Frequency, | |
| | Y FM Deviation Adjustment | 324 |
| 8-5-14. | 378fH VCO Adjustment | |
| | (CH-44/VI-57 Board) | 325 |
| 8-5-15. | Chroma Emphasis fo Adjustment | |
| | (CH-44/VI-57 Board) | 325 |
| 8-5-16. | Carrier Balance Adjustment | |
| | (CH-44/VI-57 Board)····· | 325 |
| 8-5-17. | 1H Comb-type Filter Adjustment | |
| | (YC-56 Board)····· | 325 |
| 8-5-18. | 2H Comb-type Filter Adjustment | |
| | (YC-56 Board) | |
| 8-5-19. | DC Offset Adjustment (YC-56 Board) ······ | 326 |
| 8-5-20. | C Comb-type Filter Cancel Adjustment | |
| | (YC-56 Board) | |
| 8-5-21. | Ys Level Adjustment (YC-56 Board) ······ | |
| 8-5-22. | REC Y Level Adjustment (VI-57 Board) ······ | |
| 8-5-23. | REC C Level Adjustment (VI-57 Board) ······ | |
| 8-5-24. | REC RF Level Adjustment (VI-57 Board)······ | |
| 8-5-25. | D.O.C. Level Adjustment (VI-57 Board)······ | 328 |
| 8-5-26. | Direct Y Signal Level Adjustment | |
| | (JG-11 Board) | ⋯ 328 |
| 8-5-27. | Direct C Signal Level Adjustment | |
| | (JG-11 Board) | |
| 8-6. Aud | lio System Adjustments ······ | 329 |
| 8-6-1. | PCM Audio System Adjustment ····· | 329 |
| 8-6-2. | AFM Audio System Adjustment····· | 332 |
| 8-7. Tur | ner System Adjustment····· | |
| .8-7-1. | RF AGC Adjustment (TU-82 Board) ······ | |
| 8-8. Adj | ustment Related Parts Arrangement Diagrams ····· | 338 |
| DEMOT | - COMMANDER (RMT-424) | 242 |
| | | |

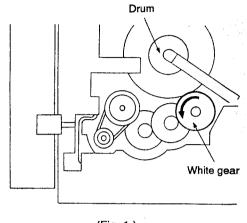
SERVICE NOTE

Removal of cassette when there is a malfunction with cassette loaded

[Removal not possible with tape wound on drum] (See Fig. 1.)

- 1) Remove the upper and bottom cases.
- Rotate the white gear next to the drum on the back of the mechanism section in the counterclockwise direction and release the tape wound on the drum.
- After releasing the wound tape, remove the cassette by the procedure below.

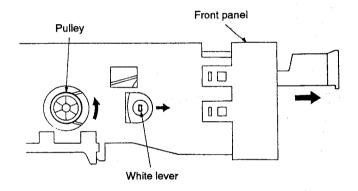
Note: If the tape is ejected without the tape inside the cassette half even if the tape winding has been released, the tape will be creased by closing of the cassette half lid when ejected.



(Fig. 1.)

[Removal not possible with tape inside cassette half] (See Fig. 2.)

- 1) Remove the upper case.
- 2) Push the white lever in the direction of arrow.
- Rotate the pulley in the counterclockwise direction, and eject manually.



(Fig. 2.)

H 3 Head cleaning

Since the new recording system is used for this unit, so the video head structure is more precisional than conventional one.

When cleaning, use the supplied or separately available (V8-25CLH) cleaning tape.

The conventional cleaning tape (V8-25CL) is not suitable for cleaning the head of this unit.

Moreover, the supplied and separately available (V8-25CLH) cleaning tape are to be used for the conventional units.

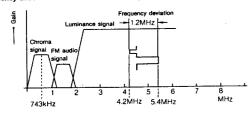
Super High Quality Picture

The information capacity is a key element for picture improvement. It can be increased by shifting up to the FM carrier frequency range. In the Hi8 video system, the FM carrier frequency range of the luminance signal is shifted up to 5.7–7.7 MHz. This is higher than the 4.2–5.4 MHz range of the standard 8 mm video system. Thanks to this, the horizontal resolution is improved to more than 400 lines.

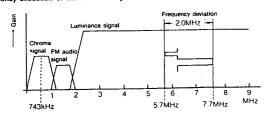
Use of High-Grade Tape Corresponding to the Hi8 Video System

Metal evaporated tape is ideal for video systems because it has large magnetic energy that allows for high-density recording. The Hilb video cassette recorder uses such high-grade tape for the Hilb video system, covering a wide frequency range, to achieve a high-quality video signal for recording/playback.

Frequency allocation of the standard video system



Frequency allocation of the Hi8 video system



S VIDEO (Separated Luminance/ Chrominance Signal) Input/Output Connectors

Conventionally, video equipments exchange the composite video signal containing the luminance (Y) signal and the chrominance (C) signal mixed. The composite video signal is liable to produce interference resulting in picture quality loss. On the contrary, an S VIDEO connector transmits or receives the video signal separated into the luminance signal and the chrominance signal. Flickers and color blur in the picture are minimized with the separated video signal, and sharpness is enhanced to such an extent that hair and fine stripes are clearly visible. The S VIDEO connector also assures an excellent editing quality with minimum picture quality loss.

Compatibility with Conventional Video Cassette Recorder

A high-quality picture can be recorded and played back on a tape for the Hi8 video system.

Recording with this VCR

| Tape used | Setting of the Hi 3 switch | Video system of the recorded tape |
|-----------------------|----------------------------|-----------------------------------|
| | AUTO HI S | Hi8 video system |
| Hi 🛭 tape | Hi 🕄 | Standard 8 mm video system |
| Standard 8 mm tape | Either position will do. | Standard 8 mm video tape system |

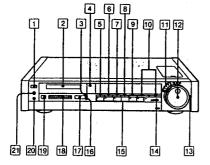
- A tape recorded in the Hi8 video system cannot be played back with an conventional 8 mm VCR.
- A standard 8 mm tape cannot be recorded and played back in the Hi8 video system.
- A tape for the Hi8 video system cannot be recorded and played back in the Hi8 video system with a conventional VCR.
- The recording tape speeds in the Hi8 are compatible with the conventional 8 mm video system.
 Recording/playback time is 4 hours using a E6/P6-120 tape or the equivalent.

Playback with this VCR

| Tape used | Playback video system | |
|---|---|--|
| Tape recorded in the Hi8 video system | The recording video system is automatically selected. | |
| Tape recorded in the standard 8 mm video system | | |

A-1

9



Front Panel A-1

1 POWER switch and indicator

2 Cassette holder

3 SYNCHRO EDIT indicator

4 OPEN/CLOSE button

5 COUNTER/REMAIN button

6 COUNTER RESET button

7 TAPE RETURN button

8 INDEX button

9 TV/VTR button

This button functions only when the VHF/UHF IN connector at the rear is connected. To view the program selected on the recorder, press this button so that the VTR indicator appears in the display window (VTR mode). To view the TV program while recording another, press this button so that the VTR indicator disappears (TV mode).

10 CHANNEL/TRACK/INDEX buttons

11 JOG dial mode indicators

Light when the JOG dial is being used for the associated operations.

JOG/SHUTTLE: For selecting the playback speeds in

various playback modes.

CHANNEL: For selecting the channels or to designate the tracks.

TIMER: For setting the clock or timer-activated recordings. INDEX: For designating the index numbers.

12 JOG diai

13 SHUTTLE ring

[14] • REC (recording) switch and indicator

15 Tape transport buttons and indicators

REW (rewind), ► PLAY (playback), ►► FF (fast-forward), ■ STOP, ■ PAUSE/STILL, x2 (double speed playback)

16 LINE 2 indicator

17 Hi 3 (Hi-Eight playback/recording) indicator

18 Peak program meter

19 Remote control detector

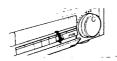
20 HEADPHONES jack (stereo minijack)

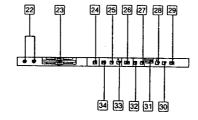
Connect stereo headphones.

21 PHONE LEVEL (headphone level) control

Adjust the volume of headphones connected.

A-2





Inside the front panel A-2

22 MIC (microphone) jacks (minijack)
Connect a microphone with a mini plug.

23 REC (recording) LEVEL controls

24 Hi 3 (High Eight) mode switch

25 SYNCHRO EDIT button

26 PCM MODE selector

27 INDEX ERASE button

28 AUDIO DUB button and indicator

29 AUDIO MONITOR selector

30 STD (standard) AUDIO selector

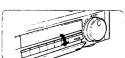
31 SHARPNESS control

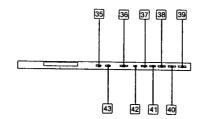
32 INDEX MARK button

33 EDIT button and indicator

34 LINE selector

A-3





Rear of the front panel A-3

35 INPUT SELECT button

36 SLEEP button

37 CHECK button

38 TIMER SET button

39 TIMER REC ON/OFF button

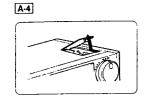
40 NEXT button.

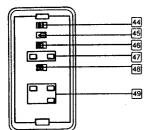
41 CLEAR button

42 CLOCK SET button

43 REC MODE button

Location and Function of Parts and Controls





Upper compartment A-4

44 AUTO INDEX switch

45 COMMAND MODE selector

46 ANTENNA SW (switch)

47 SLOW/STILL ADJ (adjust) buttons

48 AUTO STEREO switch

[49] Buttons used for channel presetting ERASE button ADD button NORMAL/CATV button





[51] CONTROL S IN jack (minijack)

52 CONTROL L connector (5-pin DIN)

53 SLAVE/MASTER selector

54 LINE IN 1 AUDIO/VIDEO jacks (phono jack)

55 LINE IN 1 S VIDEO connector (4-pin mini-DIN)

[56] AC OUTLET (unswitched, 400 W max.)

57 AC power cord

58 LINE IN 2 AUDIO/VIDEO jacks (phono jack)

59 LINE OUT 1 S VIDEO connector (4-pin mini-DIN)

60 LINE OUT 2 AUDIO/VIDEO jacks (phono jack)

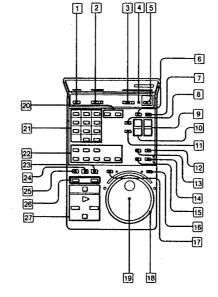
61 LINE OUT 1 AUDIO/VIDEO jacks (phono jack)

62 DIGITAL MULTI PLAY selector

63 CONTROL S OUT jack (minijack)

64 RF UNIT channel selector





Remote Commander RMT-424 A-6

The buttons without the * mark have the same function as the buttons on the VCR with the similar name or mark

The buttons with an orange dot can be used to operate Sony TVs having a mark.

1 OPEN/CLOSE button

2 Command mode selector*

3 Remote control TV/VTR selector*

4 Transmitting indicator*

Lights when any button on the Commander is pressed.

5 POWER switch

6 MUTING button*

Press to mute the sound. Press again to restore it.

7 TV/VTR button

8 DISPLAY button*

Press to retain the on-screen display. Press again to extinguish it.

9 TRACK/CH (channel) +/- button

10 VOL (volume) +/- buttons*

11 SLEEP button

12 COUNTER RESET button

13 COUNTER/REMAIN button

14 SYNCHRO EDIT button

15 AUDIO DUB button

16 TRACK/CH/INDEX button and indicator*

Press when using the JOG dial for digital multi audio track, channel or index number selection.

17 JOGSHUTTLE mode button and lamp*

Press when using the JOG dial and SHUTTLE ring for various speed playback.

18 SHUTTLE ring

19 JOG dial

20 INDEX MARK/ERASE button

21 Number buttons*

22 Various speed playback buttons*

►I (still picture), <!!/!I> FRAME (frame-by-frame picture), x1/10/x1/5 (slow motion picture), x1 (normal speed picture), x2 (double speed picture), SCAN (for picture search)

23 AUTO PB (automatic playback) button

Press to play back a tape automatically from the beginning of the tape after rewinding.

24 TAPE RETURN button

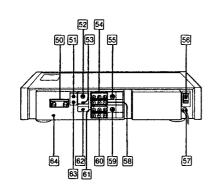
25 INDEX button

26 REC (recording) buttons

To start recording, press these buttons simultaneously.

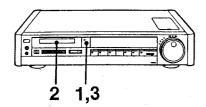
27 Tape transport buttons

5

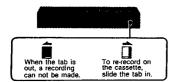


Handling the Cassette

C-1



C-2



Inserting a: Cassette: [931]

- 1 Press OPEN/CLOSE
- The power will be turned on automatically. (Auto power on)
- The cassette holder will be ejected.
- 2 Insert the cassette with the window side up.
- 3 Press OPEN/CLOSE to close the cassette holder.

Ejecting a Cassette

- 1 Press OPEN/CLOSE.
- 2 Eject the cassette.
 Press OPEN/CLOSE to close the holder.

To Prevent Accidental Erasure (624)

When a new recording is made on a previously recorded cassette, the previous recording will be automatically erased. To avoid erasing a recording unintentionally, slide out the tab on the cassette to cover the opening. (A red mark will appear.)

Recording/Playback Time

The recording time of a cassette in the LP mode is twice as long as that in the SP mode. The quality of the recording picture in the LP mode, however, will not be as good as that in the SP mode. You can select the recording speed with the REC MODE button. The playback speed is automatically set.

| Cassette used | SP | LP |
|---------------|---------------|---------------|
| P6-15 | 15 min. | 30 min. |
| E6/P6-20 | 20 min. | 40 min. |
| P6-30 | 30 min. | 1 hr. |
| P6-45 | 45 min. | 1 hr. 30 min. |
| E6/P6-60 | 1 hr. | 2 hr. |
| P6-90 | 1 hr. 30 min. | 3 hr. |
| E6/P6-120 | 2 hr. | 4 hr. |

Notes on cassettes

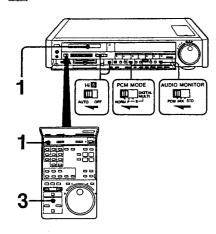
- · Never store ME (metal-evaporated) cassettes in humid
- places because they rust easily.

 Never insert anything in the small holes at the rear of the cassette as the VCR distinguishes between ME and MP cassettes by the shape of a hole.
- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.
- When the VCR is not in use, remove the cassette.

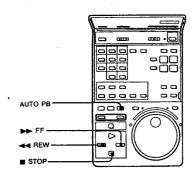
Use of ME cassettes will be recommended to obtain a high-quality picture in the LP mode with the Hi8 video system activated.

Playing back a Tape

D-1



D-2



Operation Date

You can use the buttons on the VCR with the same name or mark as those on the Commander.

Before operating

- Hi switch: AUTO
- PCM MODE selector: NORM
- · AUDIO MONITOR selector: PCM
- 1 Press OPEN/CLOSE and insert a cassette. Press OPEN/CLOSE again to close the cassette holder.
- $\boldsymbol{2}$ Turn on the TV and select the input for the VCR.

For the TV without video/audio inputs, select the channel (3CH or 4CH) for the VCR.

3 Press ➤ PLAY, Playback will begin. The indicator on the ➤ PLAY button on the VCR will light during playback.

If playback does not start

Readjust the channel for the VCR on the TV. (See page 52.)

D-2

| To stop playback | Press STOP. |
|--|--|
| To advance the tape rapidly | Press ►► FF. |
| To rewind the tape | Press ◀◀ REW. |
| To play back a tape from the beginning after rewinding — Auto play | On the Remote Commander: Press AUTO PB. On the VCR: Press ▶ PLAY keeping ◄◄ REW. |

When the tape reaches the end during playback

It will be automatically rewound. The power will remain

Picture adjustment

Turn the SHARPNESS control toward SHARP to get a sharp picture or toward SOFT for a soft picture.

If the playback picture does not appear

Check the DIGITAL MULTI PLAY selector at the rear. Set the selector to AUTO.

If the playback picture does not appear when the recorder is connected to a TV without video/audio inputs

SE CONNECTED TO A TV WITHOUT INDUSTRIES OF THE SET ANTENNA SW inside the upper compartment of the VCR to AUTO. When the selector is set to MANUAL, press TV/VTR on the Commander or the recorder so that the VTR indicator in the display window lights.

D-3



To Select the Monitor Sound

You can select the monitor sound of various kinds of the recorded tape with the AUDIO MONITOR selector.

Audio recording pattern on a video tape D-3

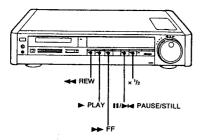
- shows the standard track.
- shows the PCM track.

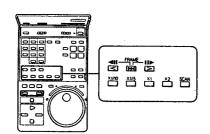
| Kind of recorded tape | Track to be played back | Setting of the AUDIO MONITOR selector |
|--------------------------------|----------------------------|---|
| Stereo | PCM | PCM |
| FM simulcast | РСМ | РСМ |
| SAP (Second Audio Programs) | PCM and/or standard | To monitor MAIN: PCM To monitor SAP: STD To monitor both: MIX |
| Audio dubbed 🚭 | PCM and standard | MIX |

To record the above kind of tapes, refer to the pages in \blacksquare

If the sound is not heard or heard only intermittently When a tape which has been recorded on a video camera recorder or a video cassette recorder without the PCM function is played back on this unit, set the AUDIO MONITOR selector to STD. The PCM indicator may blink, but it does not affect the sound.

When the TV without the video/audio inputs is connected Connect your stereo system to this unit to monitor the stereo sound.





Using the Buttons on the Remote Commander or the VCR (51)

Still picture (playback pause)

Press II/▶ PAUSE/STILL during playback. The sound will be muted. To resume normal playback, press ▶ PLAY.

Double speed playback

Press x2 during playback. The sound will be heard. To resume normal playback, press ▶ PLAY.

Picture search — Viewing the picture at a fast speed to find a particular scene

Keep pressing ◀◀ REW or ▶▶ FF during playback or in still picture mode. Release the button to resume normal playback.

Using the Buttons on the Commander Only I=5■

Slow speed playback

Press x1/10 or x1/5 during playback. Slow motion picture at 1/10 or 1/5 normal speed will be obtained. The sound will be muted. To resume normal playback, press ▶ PLAY.

Frame-by-frame playback

Press II► (forward) or **◄II** (reverse) in still picture mode. To resume normal playback, press ► PLAY.

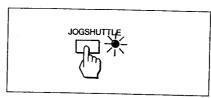
Locked picture search — Viewing the picture during fast-forward or rewind

In normal playback or still picture mode, press > (forward) or < (reverse) to select the tape transport direction and then press SCAN. To resume normal playback, press > PLAY.

If the still picture appears to shake
Press SLOW/STILL ADJ inside the upper compartment until
the picture stabilizes.

If noise band appears in slow speed playback Adjust SLOW/STILL ADJ. When the tape speed (SP/LP) is changed, readjust it.

When the unit is in picture search mode Streaks will appear and sound will be muted. E-2



E-3



E-4



Using the JOG dial and SHUTTLE ring.

- 1 Set the unit to the still picture mode.
- 2 Press the JOGSHUTTLE button on the Commander to turn on the indicator if the Commander is to be used. [E:2]
- 3 Turn the JOG dial.

Piayback occurs according to the speed at which you turn the dial. (x1/10, x1/5, normal speed) [E:3]

Turn the SHUTTLE ring and hold it at the desired speed position.

The approximate positions of the various speeds are indicated on the Commander (x1/5, normal, double, continuous picture search). [E-4]

Turn it clockwise for forward playback, or counterclockwise for reverse playback.

4. When you release JOG or SHUTTEL, the picture will freeze again.

Notes

- When JOG or SHUTTLE is in use, no tape transport buttons function,
- If the JOGSHUTTLE button on the Commander is pressed during playback, the CHANNEL of the JOG dial mode indicators on the VCR will light and the playback speed cannot be changed with the JOG dial on the VCR.

– 13 –

To Index the Tape Contents

Press the COUNTER RESET at the beginning of the tape to set the counter to zero. By noting the counter reading at a particular point, you can easily find that point later by referring to the counter.

To Stop the Tape at a Particular Point — Tape Return [3]

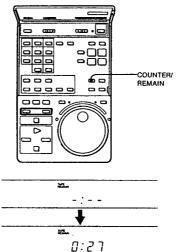
- 1 During recording or playback, press COUNTER RESET at the point you want to locate later.
- 2 When recording or playback is finished, press # STOP.
- 3 Press TAPE RETURN.
 The tape will be rewound or advanced close to the counter zero point.

To Start Playback Automatically from the Counter Zero Point — Tape Return Play

- 1 Follow steps 1 to 3 in "Tape Return" above.
- 2 Press ➤ PLAY while the tape is being rewound or advanced.

The tape will be rewound or advanced close to the counter zero point and start playback.

F-2



To Get to Know the Remaining Recording or Playback Time ***

During recording or playback, press COUNTER/REMAIN. After the counter shows "-:--" for 5 to 20 seconds, the remaining recording or playback time will be displayed.

The illustration shows that the remaining time is 27 minutes.

To return to the normal tape counter Press COUNTER/REMAIN again.

Notes on the remaining time counter

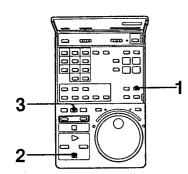
- The remaining time counter may not be accurate for — commercially available recorded tapes.
- damaged tapes and non-standard tapes.
- the beginning of a tape, especially when the tape has just been rewound (by several minutes max.).
- The remaining time counter will be changed to "-:--"
 when an unrecorded portion of the tape is played back,
 when the recorded tape speed has been changed, or
 when the tape is run rapidly.

Notes on the remaining time counter in various speed

- When you want to display the remaining time during x2 forward, x1 reverse or x2 reverse playback, press
 COUNTER/REMAIN to display the remaining tape counter after playing back the tape in normal playback mode and then resume the desired playback mode.
- The remaining time counter will stop when the VCR is set to frame by-frame or slow motion picture mode.

- 14 -

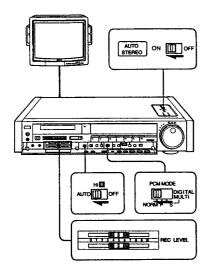
F-1



00 00

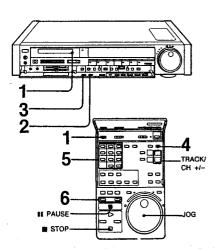
Recording TV Programs

G-1



G-2

C



Make sure that you have finished all the connections and adjustments through pages 47 to 55.

Preparation G-1

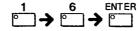
- Turn on the TV and select the video input on the TV or select the channel for the recorder.
- REC LEVEL controls: 5 position
 Hi Switch: AUTO
 PCM MODE selector: NORM
 AUTO STEREO selector: ON

Operation 1992

You can also use the buttons on the VCR with the same name or mark as those on the Commander.

- 1 Press OPEN/CLOSE and insert a cassette. The power will be automatically turned on. Press OPEN/CLOSE again to close the cassette holder.
- 2 Select the recording speed (SP or LP).
- 3 Press INPUT SELECT so that the TUNER indicator appears in the display window.
- 4 Press TV/VTR so that the VTR Indicator appears in the display window (only for a TV which is connected to the VHF/UHF INPUT on this unit).
- 5 Select the channel to be recorded with the number buttons.

e.g. To select channel 16



You can select the channel by scanning with TRACK/CH +/- or JOG.

6 Press two ● REC buttons simultaneously (or slide ● REC on the VCR to the right) to start recording.

To stop recording

Press STOP.

To stop recording momentarily

Press | PAUSE.

To resume recording, press ■ PAUSE again or ▶ PLAY. To protect the video heads and the tape, the pause mode will be automatically released after about 7 minutes and recording will stop.

When the recording is made to the end of the tape during recording

The tape will be automatically rewound to the beginning and the unit will enter the stop mode. The power remains on.

To make a frame-by-frame recording

To tape an animated program, proceed as follows: Press ● REC buttons on the Commander or slide ● REC to the right on the VCR while the unit is in recording pause mode. A very short recording of approximately 7 or 8 frames will be made and then the VCR will automatically enter recording pause mode again. Repeat this operation as many times as you like.

To watch one TV program while recording another Press TV/VTR so that the VTR indicator goes off. Select the channel you want to watch on the TV. If your TV is equipped with a TV/VTR input selector, simply set the selector to TV and select the desired channel on the TV.

If the cassette is ejected when the REC buttons are pressed

The tab on the cassette is slid out. Slide the tab in or use a new cassette.

If a stereo program is noisy

Set AUTO STEREO to OFF. The noise will be reduced though the sound is heard in monaural.

If you started recording of an unnecessary scene

You can return the tape to the desired point and set the VCR to recording standby mode.

- 1 Press STOP to stop recording.
- 2 Press ► PLAY and then press II/► to set the VCR to playback pause mode.
- 3 Locate the desired point where you wish to start recording by turning the JOG dial counterclockwise.
- 4 Press the

 REC buttons. The VCR will enter recording pause mode.
- 5 At the desired point, press II/ PAUSE/STILL to release pause mode. Recording will begin.

19

To Record Multichannel TV Sound (MTS) Broadcasts

To record a stereo broadcast

When a stereo program is received, the STEREO indicator will appear in the display window. With the usual recording procedure, the program will be recorded in stereo on the PCM track and in monaural on the standard track.

 Make sure AUTO STEREO inside the upper compartment is set to ON.

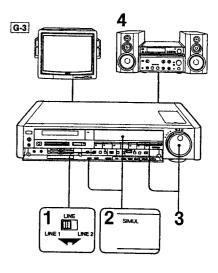
To Record a SAP (Second Audio Program)

Press the STD AUDIO selector so that the SAP indicator appears in the display window. The SAP sound will be recorded on the standard track while the MAIN sound is recorded on the PCM track. To record a MAIN broadcast only, press STD AUDIO to display the MAIN indicator. The MAIN sound will be recorded on both the PCM and standard tracks.

When a SAP sound is not to be recorded

Be sure to set the STD AUDIO selector to MAIN. If it is set to SAP and there is no SAP broadcast, no sound is recorded on the standard track

20

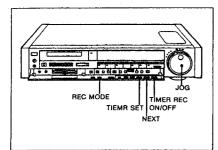


FM simulacast recording resis

Sometimes a TV station and an FM radio station will broadcast a program simultaneously. By connecting an FM tuner you can record a TV program in high-fiderity stereo. The picture and sound of the TV program are recorded on the standard track and the sound from the FM tuner is recorded on the PCM track

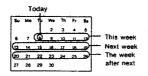
Operation

- 1 Set LINE to either LINE 1 or 2 according to the line inputs connected to the FM tuner.
- 2 Press INPUT SELECT so that the SIMUL indicator appears in the display window.
- 3 Select the channel you want to record on the VCR.
- 4 Select the station you want to record on the FM tuner.



You can preset up to six recordings to be made between today and Saturday of the week after next.

Example:



Operation IIII

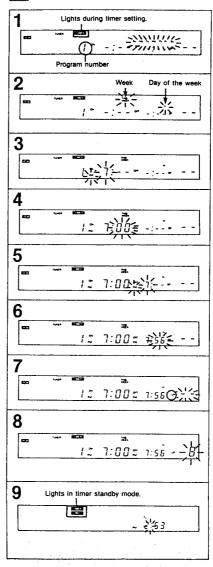
Preparation

- The clock must be set correctly. For setting, see page 55.
- Be sure the safety tab of the cassette has not been slid out.
- Make sure the cassette tape is long enough to record all programs.
- INPUT SELECT switch: TUNER PCM MODE selector: NORMAL REC LEVEL controls: 5 position Hi 3 switch: AUTO

Buttons used for timer setting

NEXT button: Every time you press this button, the item to be set will blink.

JOG dial: To set the week and day, the turn-on and turnoff times and the channel, turn clockwise to advance and counterclockwise to reverse. H-2



Operation [H-2]

Suppose you want to make a recording of channel 8 from 7 P.M. to 7:56 P.M. on Friday this week.

- 1 Press TIMER SET.
- 2 Set the week and day with JOG. Then press NEXT.
- 3 Set the turn-on hour with JOG. Then press NEXT.
- 4 Set the minute with JOG. Then press NEXT.
- 5 Set the turn-off hour with JOG. Then press NEXT.
- 6 Set the minute with JOG. Then press NEXT.
- 7 Press REC MODE to select the recording speed (SP or LP).
- 8 Set the channel to be recorded with JOG. Then press NEXT.

Approximately three seconds later the display window will change to the counter display. To preset another program, repeat steps 1 to 8. Up to 6 programs can be preset.

9 Press TIMER REC ON/OFF.

The power will be turned off and the VCR will enter the standby mode.

Recording will start at the preset turn-on time and will stop when the recording is completed. The power will be turned off automatically. H-3

At the same time on the same day every week (e.g. every Sunday)

EVERY



At the same time every day

Su Mo Tu We Th Fr Sa

At the same time every day from Monday to Saturday

() Mo Tu We Th Fr Se

At the same time every day from Monday to Friday

() Mo Tu We Th Fr()

Every week recording and every day recording

You can preset a timer recording for the same time every day or for the same day every week. Select the desired setting with JOG so that the appropriate indicator is displayed in step 2 of the procedure in the previous page. [H-3]

If you want to cancel the every week or every day recording one time only

Press TIMER REC ON/OFF so that the TIMER REC indicator goes off. When you want to begin regular timer recording again, press TIMER REC ON/OFF again so that the indicator is displayed.

If you want to correct the Item during setting
Press CLEAR. Only the program which is currently being
set will be cancelled. Reset the program.

Why is the cassette holder ejected when TIMER REC ON/OFF is pressed?

- · No cassette is inserted.
- · The safety tab of the cassette inserted is slid out.
- The tape is at its end.

To make timer recordings of the signals input from audio equipment See page 28.

Buttons which can be operated while the TIMER REC ON/OFF Indicator is displayed Only CHECK and TIMER REC ON/OFF are operable

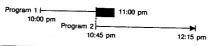
To stop recording during a timer-activated recording Press TIMER REC ON/OFF. The recording will stop and the power will be turned off. The ■ STOP and ■/▶■
PAUSE/STILL do not function.

When a timer recording is completed

- The memory for the recording will be erased if it is for only one day, and the timer program number will advance by one.
- When the tape reaches its end before the turn-off time, recording will stop and the power will be turned off. The tape will not be automatically rewound.

When the presettings of your timer-activated recordings overlap

The recording of program 2 will begin before program 1 is finished. The overlapped portion on program 1 will be cut off.



If the turn-on time of two programs is the same

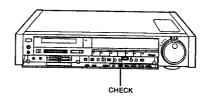
A recording of the program having the lower program number will be made. The memory of the program having the higher number will be cleared.



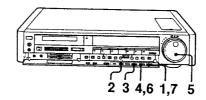
If a power interruption occurs

- If it occurs before a timer recording starts, memory for the timer recordings will be cleared. Reset the clock and preset the timer recordings. A short power interruption of less than approximately 20 seconds does not affect the memory.
- If it occurs during a timer recording, recording will stop and the power will be turned off. If the power interruption was less than approximately 20 seconds, the recording will resume.

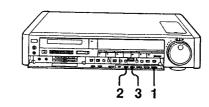
H-4



H-5



H-6



Checking the Timer Settings : IIII

Press CHECK. Every time you press CHECK, each program will be displayed in the display window.

Changing the Timer Settings | ILLE

- 1 Press TIMER REC ON/OFF so that the TIMER/ REC indicator goes off.
- 2 Press CHECK repeatedly until the program you want to change is displayed.
- 3 Press TIMER SET.
- 4 Press NEXT until the item to be changed blinks.
- 5 Change the setting with JOG.
- 6 Press NEXT until the counter display appears.
- 7 Press TIMER REC ON/OFF so that the TIMER/ REC indicator appears again.

Cancelling the Timer Setting THE

- 1 Press TIMER REC ON/OFF so that the TIMER REC indicator goes off.
- 2 Press CHECK until the program you want to cancel is displayed.
- 3 Press CLEAR. The memory for the program will be erased. If other programs have been preset for recording, press TIMER REC ON/OFF again to reactivate the

Using the VCR Before Timer-Activated Recording Starts

Press TIMER REC ON/OFF so that the TIMER REC indicator goes off.

After using the VCR, press TIMER REC ON/OFF again so that the TIMER REC indicator appears.

Note on the PCM MODE selector

A timer-activated recording for a TV program will not start unless PCM MODE is set to NORM. Blinking of a program number while checking timer settings indicates that PCM MODE is not set to the correct position for that setting.

7

25

PCM Recording and Playback - Digital Multi Audio System

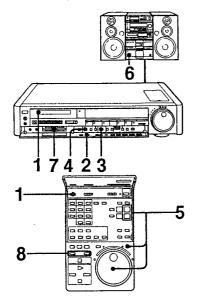
PCM Recording and Playback - Digital Multt Audio System

1-1



Normally both the video and audio signals are recorded on your video tape. However, in digital multi audio recording the full width of the tape will be divided into six tracks (Track number 1 to 6) and you can record only audio signals on each track in stereo. [E1] Up to 4-hour recording can be made on each track, which allows up to 24-hour continuous PCM recording with one cassette tape (with P6-120 cassette on LP model.

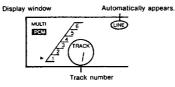
1-2



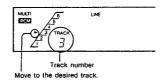
Recording (IE)

- 1 Insert a cassette.
- 2 Select the tape speed (SP or LP).
- 3 Set PCM MODE to either DIGITAL MULTI S or P position.

(Either will do.)

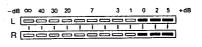


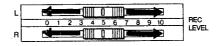
- 4 Set LINE to LINE 1 or LINE 2 according to the line inputs connected to an audio system.
- 5 Select the track on which audio recording should be made.
 - Press TRACK/CH +/-.
- Press TRACK/CH/INDEX and then turn JOG.



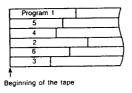
- 6 Turn on the power of an audio system and set it to playback mode.
- 7 Adjust REC LEVEL. See "Recording level adjustment" on page 28.
- 8 Press the REC buttons.

1-3

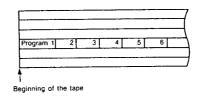




1-4



1-5



Recording level adjustment [-3]

While watching the peak program meter, manually adjust REC LEVEL

Appropriate recording level

Recording sources with medium or lower frequency signals (e.g. vocals): Adjust so that the first red element lights at the highest signal level (0 dB). Recording sources with medium or higher frequency signals (e.g. trumpets, treble sound of violin): Adjust so that the element immediately before the first red element lights (-1 to -3 dB).

Notes on the REC LEVEL controls and the peak program meter

- During playback, the peak program meter shows the peak of the recorded level.
- After recording, it is recommended that the REC LEVEL controls are set to the miminum levels for playback.
 These controls do not affect the volume during playback but noise may appear when stopping playback and this may damage the speakers.

If you make a digital audio recording through a PCM digital audio processor which is not based on the 8 mm PCM standard

PCM recording can be made on 16 bits using the full width of the tape. In this case, set SHARPNESS to the position between the center and SHARP. Select SP tape speed.

Timer Activated FM Recording

By connecting an FM tuner with timer setting function (Sony ST-S333ES, ST-S555ES, etc.), you can preset up to six FM programs for recording in PCM digital sound. You can select parallel or series recording by switching the PCM MODE selector.

Parallel recording [-4]

Set PCM MODE to DIGITAL MULTI P.
Up to six programs can be recorded from the beginning of any of six separate tracks (e.g. when you want to record different kinds of program separately).
The illustration of an enlarged tape shows that the program 1 to 6 are to be recorded on track number 1 to

Series recording 1-5

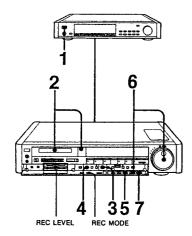
Set PCM MODE to DIGITAL MULTI S.

Up to six programs can be recorded continuously on one track (e.g. when you want to record a serial program every day).

The illustration of an enlarged tape shows that the program 1 to 6 are to be recorded on track number 3 successively.

27

1-6



Operation [-6]

Before setting the timer

- · Make sure the clock is set correctly.
- Set REC LEVEL to the 5 position.
- · Select the tape speed (SP or LP).
- Connect an FM tuner to AC OUTLET and to LINE IN 1 or LINE IN 2 AUDIO.
- Turn on the power of an FM tuner and preset programs.
- 2 Insert a cassette.
- 3 Set PCM MODE to DIGITAL MULTI P or S.
- 4 Set LINE to LINE 1 or LINE 2 according to the line inputs connected to the FM tuner.
- 5 Press TIMER SET.
- 6 Set the following items with JOG and NEXT.
 - Track number
- . Day of the week
- Turn-on time
- Turn-off time

For details, refer to "Timer-activated recording" on pages 22 and 23.

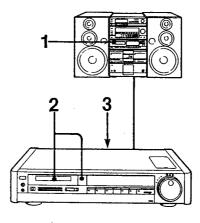
7 Press TIMER REC ON/OFF. The power will be turned off.

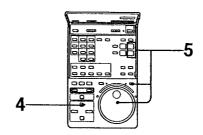
To select the track for timer-activated PCM recording [1-7]
Both the track in operation and that for timer setting will be shown in the display window. Select the track for timer setting with JOG. To select the playback track, use the CHANNEL/TRACK/INDEX +/- button.

Notes

- In series recording, always select the same track number.
 If a different track number is selected, all the programs will be recorded on the track which was selected last.
- Timer setting of a TV program recording and a digital audio recording can be made on one tape. However, such setting is not recommended because you have to switch the position of PCM MODE before each recording starts.

1-8





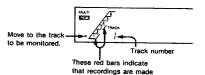
Playback (E)

- 1 Turn on an audio system and select the video input on an amplifier.
- 2 Insert a cassette.
- 3 Set DIGITAL MULTI PLAY at the rear to AUTO. If no sound is heard with the tape recorded on other VCR, set the selector to MULTI.
- 4 Press ► PLAY.
- 5 Select the track to be monitored.

 Press TRACK/CH +/-.

riess II

-- Press TRACK/CH/INDEX and then turn JOG.



on the tracks.

To stop playback

To stop playback momentarily
Press 11/bl-4. Press again to resume playback.

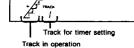
Note

Press STOP.

 When DIGITAL MULTI PLAY is set to MULTI, all red bars will light regardless of the recorded or unrecorded tracks.
 During playback, it is recommended that the REC LEVEL controls are set to "0" position, otherwise noise may appear and this may damage the speakers when stopping playback.

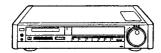
19

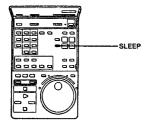
1.7



To Have the Unit Turned Off Automatically — Sleep Timer

J





You can set the unit to turn off automatically during recording or playback after a certain time, up to 5 hours, in steps of 30 minutes.

Every time you press SLEEP, the recording/playback duration will change as follows:

0:30 (To turn off 30 min. later) → 1:00 (1 hr.). → 5:00 (5 hrs.)

Current time display ←

Operation N

- · Make sure the clock is set correctly.
- Press SLEEP during recording or playback.
 The current time display will change to the SLEEP timer duration display.
- 2 Press SLEEP repeatedly until the desired recording/playback duration appears in the display window.

The power will be turned off automatically when recording/playback has been made in preset duration.

To cancel the SLEEP timer function

Press SLEEP repeatedly until the current time display appears.

When the tape reaches the end before the preset duration it will be automatically rewound but the power will remain on during the preset duration.

If you press SLEEP when the unit is in stop mode. The SLEEP button is operable in stop mode. You can set the sleep timer before starting recording or playback.

The desired programs can be easily located by the index signal marked on the tape.

landing Index Signals was 7

To mark index signals automatically

Set AUTO INDEX inside the upper compartment to ON. An index signal is automatically marked on a tape when REC are pressed or timer-activated recording starts.

You cannot mark an index signal automatically

- · on a tape when a recording is started by releasing the recording pause or playback pause mode
- on a tape where the tape speed (SP/LP) has been changed.

To mark index signals manually [K-1]

1 Set AUTO INDEX to OFF.

2 During recording or playback, press INDEX MARK at the point where an index signal is to be marked. The INDEX indicator in the display window blinks while the index signal is being marked.

You cannot mark an index signal by pressing INDEX MARK

during editing (i.e. EDIT indicator lights).

· while playing back a tape which has no audio/video signals recorded on the PCM track (i.e. the PCM indicator is not displayed).

To mark index signals automatically during digital multi audio recording - Auto index function

Set AUTO INDEX to ON.

INDEX MARK

During recording, the unit searches for the blank portion between programs (music, etc.) and marks an index signal automatically.

Auto index function will not operate correctly

- · when the blank portion between the programs is not detected due to low level signal-to-noise ratio of a program source.
- · when the blank portion is less than 3 seconds.
- · when an index signal is marked on other portions than blank in some program sources.

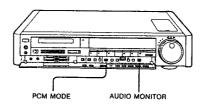
The index function can be activated

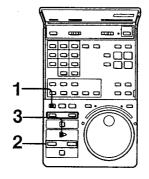
- when the unit is in PCM recording/playback mode as well as in normal recording/playback mode.
- even when playing back a tape whose safety tab is slid

A required interval at which index signals are marked There should be more than a 2-minute interval between each index signal. If an index signal is marked at a shorter interval, the index signal may not be detected correctly.

When an index signal is being marked during playback A black noise band will appear at the bottom of the playback picture and the sound will be lowered. However, the recorded signals on the tape are not affected. If the EDIT button is pressed, a black noise band may disappear but the picture may be distorted.

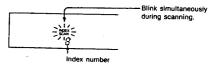
K-2





Before operating

- · Set PCM MODE to the appropriate position. See page
- · Set AUDIO MONITOR to the appropriate position. See page 13.
- 1 Press INDEX once when the unit is in stop or playback mode.
- To scan the programs ahead, press >> FF. The tape will be rewound or rapidly advanced to the next index signal marked.



The tape will be played back for approximately 10 seconds, and then rewound or advanced to the next index signal. Each time an index signal is detected, the displayed index number will increase.

3 At the desired program, press ▶ PLAY. Normal playback of that program will begin.

Notes

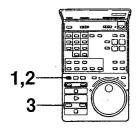
- . If the tape is rewound to the beginning during index scan or index search, playback will begin automatically.
- · If the tape reaches the end during index scan or index search, the tape will stop automatically.
- Index function may not operate correctly with a tape on which both normal and digital multi audio recordings have been recorded.
- When index scan is done using a digital multi audio recorded tape, set PCM MODE to P or S. Setting to NORM will cause sound distortion.

K-1



K-3

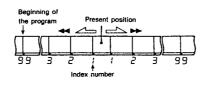




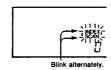


You can locate the desired program and play it back automatically by designating the number of the index signals to be detected.

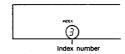
Up to the 99th index signal from the present position on the tape can be located.



 Press INDEX once when the unit is in stop or playback mode.



2 Press INDEX repeatedly until the index number of the desired program is displayed.



3 To locate the previous program on the tape, press REW.

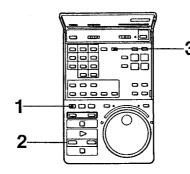
To locate a program ahead, press >> FF.

The tape will be rewound or rapidly advanced. Every time an index signal is detected, the displayed number will decrease. When the number reaches 0, playback of your desired program will begin.

To designate larger index numbers

After pressing INDEX (step 1), select an index number by pressing TRACK/CH +/- or turning JOG.

K-4



Erasing Index Signals ites

Erasing while index scanning — To erase the index signals in sequence

- 1 Press INDEX once.

Each time an index signal is detected, the tape will be played back for approximately 10 seconds and then rewound or rapidly advanced.

3 Approximately two seconds after playback has started by the Index signal to be erased, press INDEX ERASE. After the erasure, index scan will resume. At each index signal to be erased, press INDEX ERASE.

To stop index scanning, press STOP.

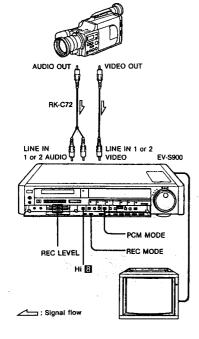
Erasing while index search — To erase a particular index signal

- Press INDEX repeatedly until the number of the index signal to be erased is displayed.
- 2 Press ◀◀ REW or ▶► FF.
 The tape will be rewound or rapidly advanced until the designated index signal is located, and playback will
- 3 Approximately two seconds after, press INDEX

After the erasure, normal playback will begin.

Notes

- INDEX ERASE should be pressed within approximately 10 seconds after playback starts.
- The index signal cannot be erased if it is recorded on a portion where the recording tape speed has been changed.
- During erasing index signals, a black noise band will appear at the bottom of the picture and the sound will be lowered. However, this does not affect audio/video recording signals on the tape.



Editing a Home Movie Tape from Another VCR to This VCR INT

Example: Playing back with the 8 mm video camera recorder and recording with this VCR

Connection

Use the supplied video connecting cord (equipped with yellow plugs) for video connection and the optional RK-C72 connecting cord for audio connection.

Preparation

- . REC MODE button: SP or LP
- Hi 🛭 switch: AUTO
- PCM MODE selector: NORM
- REC LEVEL controls: [5]

Operation

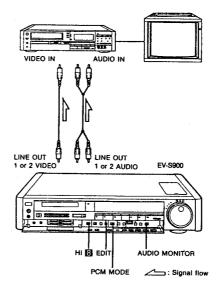
- 1 Press INPUT SELECT so that the LINE indicator appears and set the LINE selector to LINE 1 or 2 according to the line inputs connected to the other VCR.
- 2 Insert cassettes; a recorded cassette into the other VCR and a cassette for recording into this VCR.
- 3 Start playback with the other VCR and start recording with this VCR.

If another VCR is equipped with an S VIDEO output connector

Connect it to LINE IN 1 S VIDEO of this unit instead of the connection between the phono-type video jacks. Use the supplied S VIDEO connecting cord.

When the audio outputs of another VCR are stereo Connect the audio L/R jacks on another VCR to the LINE IN AUDIO L/R jacks on this VCR with the supplied audio connecting cord.

L-2



Editing a Home Movie Tape from this VCR to Another VCR (192)

Example: Playing back with this VCR and recording with a Beta or VHS format VCR

Connection

Use the supplied video connecting cord (equipped with yellow plugs) for video connection and the supplied audio connecting cord (equipped with red and white plugs) for audio connection. If the audio input of another VCR is monaural, use the optional RK-C72 connecting cord.

Preparation

- Hi 🛭 switch: AUTO
- · PCM MODE selector: NORM
- EDIT button: ON (The EDIT indicator lights.)
- AUDIO MONITOR selector:

Select the sound to be recorded. (See page 13.)

Operation

- 1 Set the input selector on the other VCR to LINE.
- 2 Insert cassettes; a recorded cassette into this VCR and a cassette for recording into the other
- 3 Start playback with this VCR and start recording with the other VCR.

Use of the EDIT button

- When editing a tape onto another VCR, press EDIT on this VCR so that the EDIT indicator lights, Loss of picture quality will be minimized. Be sure to turn off the indicator by pressing EDIT after editing.
- The picture and tone quality of a newly edited tapes will be noticeably impaired even if the EDIT button is activated. Avoid repetition of editing tapes.

Picture adjustment during editing

The SHARPNESS control does not function while the EDIT indicator is lit.

Note

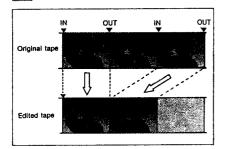
Do not connect the same VCR to both the LINE IN and LINE OUT jacks of this VCR. This may cause hum noise.

- 23 -

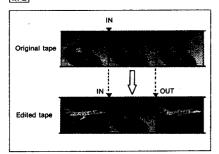
Various Tape Editing Methods

Synchronized Editing from/onto a Sony VCR with the Control Terminal

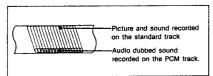
M-1



M-2



M-3



Various methods for easy and accurate tape editing are available with this VCR.

Select the best method according to your purpose and to the video/audio equipment you are using.

Assemble editing M-1

Only the desired portions of an original tape can be edited onto another tape one portion by one. Decide the start point (IN) and end point (OUT) of editing on the playback VCR. Decide the start point of editing on the recording VCR.

Automatic assemble editing

With this method, editing of the assigned scenes can be carried out automatically in the assigned order. Use a VCR with the automatic assemble editing function as playback VCR or a video editing controller.

Insert editing M:2

A prerecorded portion of a tape can be replaced with a new scene. Decide the start point (IN) and end point (OUT) of editing on the recording VCR. On the playback VCR, decide the start point.

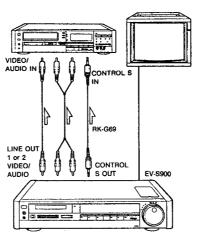
Audio dubbing M-3

The sound recorded on the PCM audio track of a tape can be replaced with a new sound without changing the picture and sound recorded on the standard track.

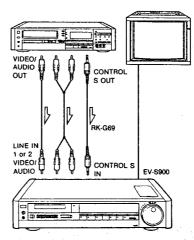
Notes

- The picture may be distorted at the end of an insert editing.
- The various playback pictures may be distorted when edited from/onto another VCR.

N-1



N-2



: Signal flow

If another VCR is equipped with a control terminal (CONTROL S, CONTROL L or REMOTE Jack), the two VCRs can be operated simultaneously using the SYNCHRO EDIT button.

Connecting a VCR with the CONTROL S

With this connection, use this unit for playback, and the other VCR for recording.

Use the optional RK-G69 connecting cord for CONTROL S connection.

Connecting a VCR with the CONTROL S OUT jack INFA

With this connection, use this unit for recording, and the other VCR for playback.

Use the optional RK-G69 connecting cord for CONTROL S connection.

To operate another VCR connected to the CONTROL S OUT jack of this VCR with the supplied Remote Commander

Set the command mode selector on the Commander according to the type of another VCR,

To operate a VCR without a command mode selector VTR1: for a Sony Beta format VCR VTR2: for a Sony 8 mm format VCR

To operate a VCR equipped with a command mode selector

Set the selector on the Commander to the same command mode as that selected on the VCR.

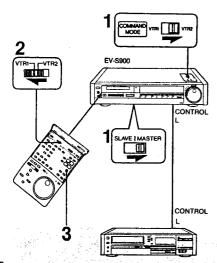
To operate this VCR with the Commander Switch the command mode selector on this VCR to a different position from that selected for the other VCR, and set the command mode selector on the Commander to the same position as that selected on this VCR.

Notes on connection

- If another VCR is equipped with both CONTROL L and CONTROL S jacks, CONTROL S connection is recommended.
- If another VCR is equipped with an S VIDEO IN connector, connect it to the LINE OUT 1 S VIDEO connector of this unit instead of the connection between the phono-type video jacks. Use the supplied S VIDEO connecting cord.

N-4

25



Connecting a VCR or Video Camera Recorder with the REMOTE (or CONTROL L) jack INST

With this connection, this unit is used for playback and the other VCR for recording.

- Use the optional VK-800 connecting cord for control L connection.
- Be sure to set the SLAVE/MASTER selector on the rear of this unit to MASTER.

When set to MASTER, the control signal is transmitted through the CONTROL L connector for synchronized editing operation.

Notes

- If the other VCR is monaural, use the optional RK-C72 audio connecting cord.
- If the REMOTE jack of the video camera recorder is stereo mini-mini type, use the optional VK-810 connecting cord.

To operate the VCR connected to the CONTROL L connector with the supplied Remote Commander [N-4]

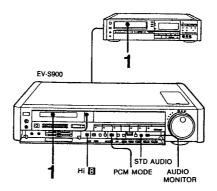
- 1 Set SLAVE/MASTER to MASTER and COMMAND MODE to VTR2 on this unit.
- 2 Set the command mode selector on the Remote Commander to VTR1.
- 3 Point the Commander toward this unit and press the appropriate tape transport button on the Commander. The connected VCR will operate.

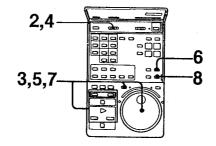
To operate this VCR with the Remote Commander Set the command mode selector on the Commander to VTR2.

Note

The command mode (VTR1, VTR2 or VTR3) of the other VCR is ineffective for the remote control operation through the CONTROL L connector.

N-5





Assemble Editing (NET):

Use this unit for playback and the other VCR for recording.

For connection, see pages 39 and 40.

Preparation

- Hi 🛭 switch: AUTO
- PCM MODE selector: NORM
- AUDIO MONITOR selector: Select the sound to be recorded. (See page 13.)

Operation

- 1 Insert cassettes; a recorded cassette into this unit, and a cassette for editing into the recording VCR.
- 2 Set the command mode selector on the Commander to the appropriate position for the recording VCR.

 For the setting, see pages 39 and 40.
- 3 Locate the point of the tape where you want to start editing on the recording VCR and set it to recording pause mode.
- 4 Set the command mode selector on the Commander to the appropriate position for this VCR.

For the setting, see pages 39 and 40.

- 5 Play back the tape on this unit to locate the end point to be edited and set the unit to playback pause mode.
- 6 Press COUNTER RESET.
- 7 Rewind the tape on this unit to the start point to be edited and set the unit to playback pause mode.
- 8 Press SYNCHRO EDIT. The playback starts on this unit and the recording starts on the other VCR.
- 9 To edit the next scene, repeat steps 2 to 8.

When you use JOG/SHUTTLE to locate the editing points Be sure to press SYNCHRO EDIT after the transmitting indicator goes out, otherwise the unit starts playback but may pause again.

When the editing is completed Set both VCRs to stop mode.

During editing

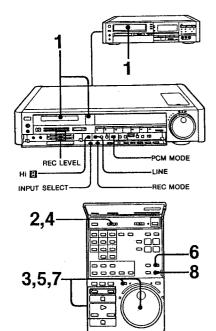
The COUNTER RESET button does not function.

To cancel the assemble editing mode

Press SYNCHRO EDIT or STOP on the Commander or the VCR.

When assemble editing starts

The EDIT indicator will light automatically and go out when the editing is completed.



When the editing is completed Set both VCRs to stop mode.

To concel the Insert editing mode
Press SYNCHRO EDIT or ■ STOP on the Remote
Commander or the VCR.

When you use JOG/SHUTTLE to locate the editing points Be sure to press SYNCHRO EDIT after the transmitting indicator on the Commander goes out, otherwise the unit starts recording but may pause again.

During insertion

The COUNTER RESET button does not function.

Insert Editing INTO

Use this unit for recording and the other VCR for playback.

For connection, see pages 39 and 40.

Preparation

REC MODE button: SP or LP
PCM MODE selector: NORM
HI 3 switch: AUTO
REC LEVEL controls: 5
INPUT SELECT button and LINE selector: Select the line inputs connected to the other VCR.

Operation

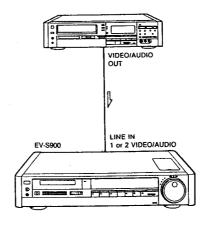
- Insert cassettes; a cassette for editing into this unit, and an insert source cassette into the playback VCR.
- 2 Set the command mode selector on the Commander to the appropriate position for the playback VCR. For the setting, see pages 39 and 40.
- 3 Locate the start point to be inserted on playback VCR and set it to playback pause mode.
- 4 Set the command mode selector on the Commander to the appropriate position for this VCR.

For the setting, see pages 39 and 40.

- 5 Play back the tape on this unit to locate the point where the insertion should stop (end point) and set it to playback pause mode.
- 6 Press COUNTER RESET.
- 7 Rewind the tape on this unit to the point where the insertion should start (start point) and set it to recording pause mode.
- 8 Press SYNCHRO EDIT. The recording starts on this unit and the playback starts on the other VCR.

When the counter display reaches zero point, indicating that the insertion is completed, this unit will enter recording pause mode and the other VCR will enter playback pause mode.

0-1



Connection

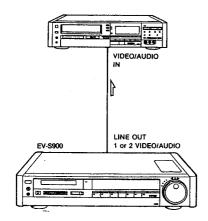
Using this VCR for recording O-1 For details on connection, see 1-1 on page 36.

Using this VCR for playback 0.2 (on the next page) For details on connection, see 1.2 on page 37.

Operation

Assemble editing

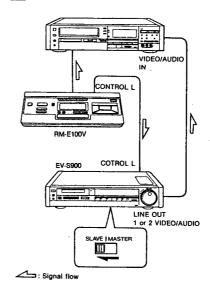
- 1 Insert cassettes; a recorded cassette into the playback VCR, and a cassette for editing into the recording VCR.
- 2 Set the input selector on the recording VCR according to the inputs connected to the playback VCR.
- 3 Play back the tape on the recording VCR to locate the point where editing should start and set it to recording pause mode.
- 4 Play back the tape on the playback VCR to locate the start point to be edited and set it to playback pause mode.
- 5 Press II PAUSE to release the pause mode on both VCRs simultaneously.
- 6 Set both VCRs to pause mode at the point where the editing should stop while watching the playback picture.
- 7 To edit the next scene, repeat steps 3 to 6.
- 8 When editing is completed; set both VCRs to stop mode.



Insert editing

- 1 Insert cassettes; a cassette for editing into the recording VCR and a insert source cassette into the playback VCR.
- 2 Set the input selector on the recording VCR according to the inputs connected to the playback VCR.
- 3 Play back the tape on the playback VCR to locate the start point to be inserted and set it to playback pause mode.
- 4 Play back the tape on the recording VCR to locate the point where the insertion should stop and press COUNTER RESET.
- 5 Rewind the tape on the recording VCR to locate the point where the insertion should start and set the VCR to recording pause mode.
- 6 Press II PAUSE to release the pause mode on both VCRs simultaneously.
- 7 At the counter zero point, set the recording VCR to recording pause mode. Set the playback VCR to playback pause mode.
- 8 When editing is completed, set both VCRs to stop mode.

P-1



If you use a video editing controller (RM-E100V, etc.) or a VCR with automatic assemble editing function (EDV-9500, etc.), up to 8 scenes of the original tape can be automatically edited onto another tape successively.

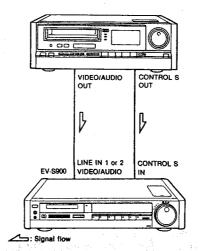
Using the Video Editing Controller RM-E100V IDSI

Connect another VCR and the controller as illustrated. With this connection you can edit up to 8 scenes of the original tape programmed on the controller onto another tape. For details on operation, refer to the instruction manual furnished with the controller.

Note

Be sure to set SLAVE/MASTER on this VCR to SLAVE. When set to SLAVE, the control signal is transmitted through the CONTROL L connector of the video editing controller to remotely control this VCR.

P-2



Using a VCR with Automatic Assemble Editing Function 12≥1

Make the control S connection besides the audio and video connections.

Use this unit for recording and the other VCR for playback.

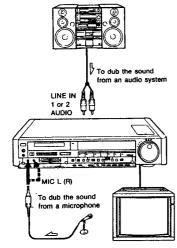
You can edit up to 8 scenes of the original tape programmed on the other VCR onto the tape inserted in this unit

For details, refer to the instruction manual furnished with the other VCR.

Notes

- Pre-roll operation will not be carried out on the EDV-9500.
 With this connection, automatic assemble editing or insert editing using the SYNCHRO EDIT button cannot.
- be done.

Q-1



You can additionally record music or narration on the prerecorded tape while watching the playback picture of the tape. Audio dubbed sound will be recorded on the POM track.

Connection [65]

Notes on connection

- If only one microphone is used, connect it to the MIC L jack. The sound from the L jack is recorded on the right and left channels of the PCM track while the sound from the R jack is recorded on the right channel only.
- To dub the sound from the audio system, disconnect the microphone from the MIC L/R jacks.
- A plug-in-power microphone cannot be used with this unit.

Operation [72]

Before operation

- PCM MODE switch: NORM
- . AUDIO MONITOR selector: PCM or MIX
- Turn on the TV and select the input for the VCR or select the channel for the VCR.
- 1 Press INPUT SELECT so that the LINE indicator appears.

When dubbing the sound from the audio system, select LINE 1 or 2.

- 2 Play back the tape to locate the point where audio dubbing should start and press II PAUSE.
- 3 Press AUDIO DUB.

The AUDIO DUB indicator on the VCR will light.

- 4 Play back the audio source and adjust REC
- 5 Press II PAUSE again to release playback pause mode.

Audio dubbing will start.

To stop audio dubbing momentarily Press II PAUSE.

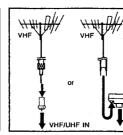
To stop audio dubbing Press STOP.

To dub the sound of a TV program
Press INPUT SELECT to display the TUNER indicator and select the desired channel. Proceed with steps 2 to 5.

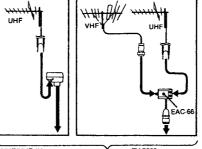
Notes

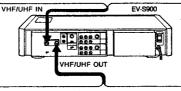
- During dubbing, a black band or picture noise appears in the center and lower portions of the screen, but the recorded picture will not be affected.
- The audio signals prerecorded on the PCM track and index signals will be erased after completion of audio dubbing.
- The audio dubbed sound cannot be played back on a VCR without the PCM recording/playback function or a video camera recorder.

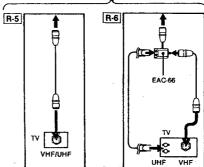
R-1 R-2



R-3
R-4
UHF
UHF
UHF
UHF
UHF
UHF







To watch the playback picture on a TV or watch the TV program selected on this VCR, the VCR and the TV receiver have to be connected properly. Disconnect the TV antenna cable from the TV receiver and connect it to this unit.

Notes on making connections

- Turn off all equipments before making connections.
- Do not connect the AC power cord to a wall outlet until all the connections of the VCR and the TV have been completed.
- Make connections firmly. Loose connections may cause a distorted picture.

Connecting a TV without Audio/Video Inputs

Connections between the antenna and this VCR

The connections vary according to the type of the antenna you have.

R-1 Combination VHF/UHF antenna (75-ohm coaxial cable)

Most combination antennas are equipped with a U/V band separator (signal splitter). Take off the separator.

- R-2 VHF antenna (75-ohm coaxial cable or 300-ohm ribbon type lead-in)
- R-3 UHF antenna (300-ohm ribbon type lead-in)
- R-4 Separate VHF and UHF antennas
- If your antenna end is a 75-ohm coaxial cable, the optional F-type connector should be attached. (See [B-7] on next page for attachment.)
- If your antenna end is a 300-ohm ribbon-type lead-in, the supplied antenna connector should be attached. (See [R-8] on next page for attachment.)
- If both the separate VHF and UHF antennas are connected, use the optional EAC-66 U/V band mixer. (See 30 on next page for attachment.)

Connections between this VCR and a TV

The connections vary according to the type of the antenna terminal of your TV.

- R-5 VHF/UHF antenna terminal
- R-6 Separate VHF and UHF antenna terminals
- If your TV has a VHF/UHF terminal, use the supplied 75-ohm coaxial cable.
- If your TV has separate VHF and UHF terminals, use the optional EAC-66 U/V band separator.

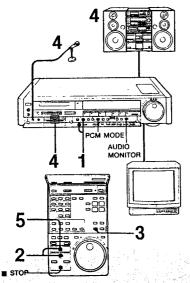
Once the connections explained above have been made, the antenna TV signats, as well as the signal from this VCR, will be ted to the TV and you can view TV programs in the usual way.

Note

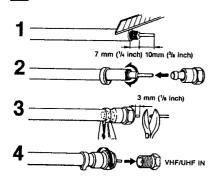
Note Keep the VCR away from the TV, if the display or sound is affected.

Q-2

28



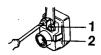
46



How to attach an F-type connector R-7

- Strip the cable covering to expose the center conductor.
- 2 Pass the ring over the cable and fold back the shield. Insert the inner conductor into the F-type connector.
- 3 Crimp the ring to hold the conductor in place.
- 4 Connect to the VHF/UHF IN connector.

R-8

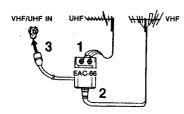


How to attach an antenna connector [R-8]

- 1 Wrap the wires of a 300-ohm twin lead-in around the posts and tighten the screws.
- 2 Connect to the VHF/UHF IN connector.

R-9

29



How to attach an EAC-66 U/V band separator (mixer) [R-9]

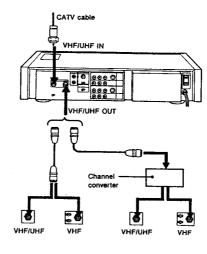
- 1 Wrap the wires of a 300-ohm twin lead-in around the posts and tighten the screws.
- 2 Plug the F-type connector of the VHF antenna cable into the separator.
- 3 Connect to the VHF/UHF IN connector.

Caution

Connections between the recorder VHF/UHF OUT connector and the antenna terminals of a TV receiver should be made only as shown in these instructions. Failure to do so may result in operation that violates the regulations of the Federal Communications Commission regarding the use and operation of rf devices,

Never connect the output of the recorder to an antenna or make simultaneous (parallel) antenna and recorder connections at the antenna terminals of your TV.

R-10



Connecting a CATV cable [R-10]

Connecting examples are as illustrated, however, we recommend you to consult your cable company to make sure that the cable is properly connected. If your TV is not a cable TV compatible type, the cable TV channel converter should be connected between the VCR and a TV so that you can watch another cable TV program while recording one cable TV program.

Note to CATV system installer in the U.S.A. This reminder is provided to call the cable TV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to grounding system of the building as close to the point of cable entry as practical.

Connecting a TV/Color Monitor Equipped with Audio/Video Inputs (CAR)

With the following connection the picture and sound quality will be better than that when the TV is connected only to the VHF/UHF OUT terminal on the VCR.

- Connect the antenna cable to VHF/UHF IN on the VCR.
- 2 Connect the VHF/UHF OUT to your TV. This connection is not required for a color monitor.
- 3 Connect LINE OUT 1 S VIDEO to the S VIDEO input on the TV/color monitor with the supplied S VIDEO connecting cord.
- 4 Connect LINE OUT 1 AUDIO to the audio inputs on the TV/color monitor with the supplied audio connecting cord.

To watch the playback picture

Select the TV/VTR input selector on the TV to VTR.

Selecting the ANTENNA SW selector

Check ANTENNA SW inside the upper compartment after connecting the antenna.

If you connect a TV not equipped with audio/video inputs

Set to AUTO.

To watch the playback picture, simply press ▶ PLAY.
 When set to MANUAL, you have to press TV/VTR so that the VTR indicator is displayed.

If you connect a TV equipped with audio/video inputs Set to MANUAL.

 To watch a TV program, simply select the channel on the TV. When set to AUTO, you have to press TV/VTR so that the VTR indicator disappears.

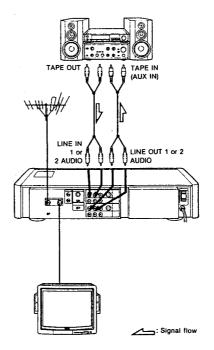
Note

- With this connection, the TV/VTR button on this unit does not function.
- With a color monitor, you cannot watch one TV program while recording another.
- Keep the audio/video connecting cords away from the antenna cable, otherwise the picture may be affected.

When a TV/monitor is not equipped with the S VIDEO input connector

Connect LINE OUT 1 (or 2) VIDEO to the video input jack on the TV/monitor with the supplied video connecting cord.

R-12



Connecting an Audio System 1657

You can enjoy playback of tapes recorded in stereo or recorded from an audio source such as an FM tuner or CD player in digital multi audio system, when the VCR is connected to your audio system.

For recording connect LINE IN 1 (or 2) AUDIO to the tape outputs on a stereo amplifier with the supplied audio connecting cord.

For playback connect LINE OUT 1 (or 2) AUDIO to the tape inputs or auxiliary inputs on a stereo amplifier with the supplied audio connecting cord (or optionL RK-C74 connecting cord).

Notes

- If the VCR is installed near a tuner or a radio, noise may be heard in AM reception.
- A PCM recorded tape has a wide dynamic range. Before playing back a tape, turn down the volume on the amplifier to avoid damaging the speakers.
- Before connecting or disconnecting the power cord of the VCR, be sure to turn off the connected amplifier.

ယ

Your TV receiver must be adjusted to receive the signal from your recorder. If you connect a color monitor or a TV equipped with video/audio input jacks, it does not need adjusting.

- 1 Set RF UNIT at the rear to 3CH or 4CH whichever channel is not active in your area.
- 2 Press POWER. The indicator lights.
- 3 Insert the cassette.
- 4 Press ► PLAY.
- 5 Turn on the TV.
- 6 Set the TV to either VHF channel 3 or 4 to agree with the RF UNIT setting.

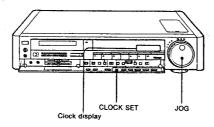
The playback picture will be displayed on the TV screen. If a picture does not appear on the TV screen or if the display is not clear, fine-tune the channel on the TV. For details on TV channel adjustment, see the instruction manual of the TV receiver.

Check!

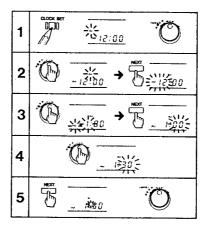
Check that the display on the screen changes when you stop the tape by pressing STOP on the recorder. (To eject the cassette, press OPEN/CLOSE.) If the display does not change, repeat the preceding steps.

Now your TV receiver is tuned on the recorder. Whenever you use this VCR, you should set the TV to the channel which you have chosen above.

U-1



U-2



When you connect the AC power cord to a wall outlet, "Su AM12:00" will blink in the display window, indicating that the clock is ready to be set.

The illustration [U-1] shows the buttons used for setting

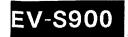
the clock.

- e.g. To set the clock to 1:30 p.m. on Wednesday $\boxed{\text{U-2}}$
- Keep CLOCK SET pressed for a few seconds with a pencil or similar.
 The TIMER of the JOG dial mode indicators lights.
- 2 Set the day of the week with JOG, and then press NEXT.
- 3 Set the hour with JOG, and then press NEXT. AM12:00 = midnight PM12:00 = noon
- 4 Set the minute with JOG.
- 5 Press NEXT at the same time as an announced time signal for accurate setting. The clock will start. The dots of the colon will alternately blink every 30 seconds. The CHANNEL of the JOG dial mode indicators lights.

To reset the clock

Press CLOCK SET for a few seconds. Reset the clock, following the preceding steps 2 to 5.

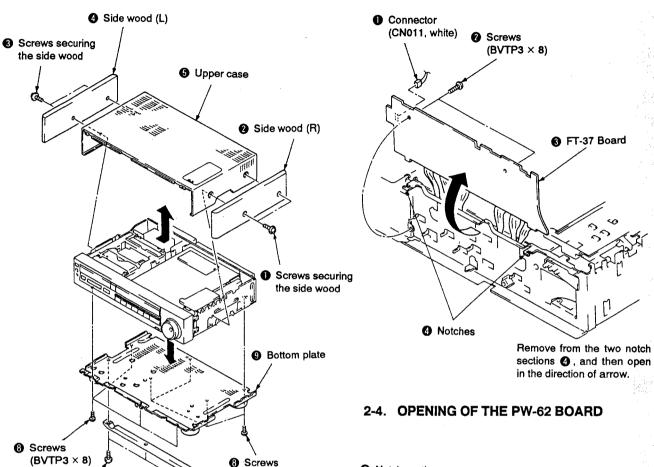
When "Su AM 12:00" blinks in the display window There has been a power interruption for more than 20 seconds or the power cord has been disconnected for more than 20 seconds. In this case, reset the clock.



SECTION 2 DISASSEMBLY

2-1. REMOVAL OF UPPER AND LOWER CABINETS

2-3. OPENING OF THE FT-37 BOARD



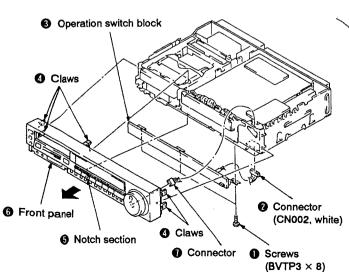
(BVTP3 × 8)

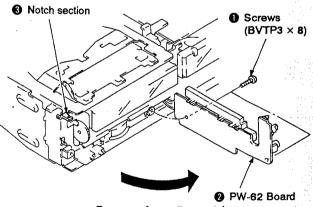
Bottom stay

2-2. REMOVAL OF FRONT PANEL

6 Screws

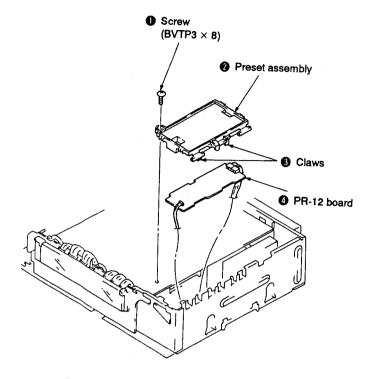
(BVTP3 × 12)





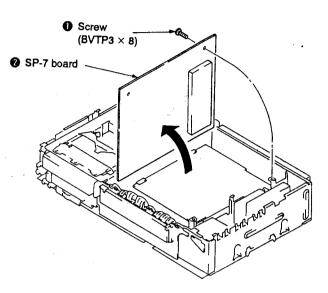
Remove from the notch section **3**, and then open in the direction of arrow.

2-5. REMOVAL OF THE PR-12 BOARD



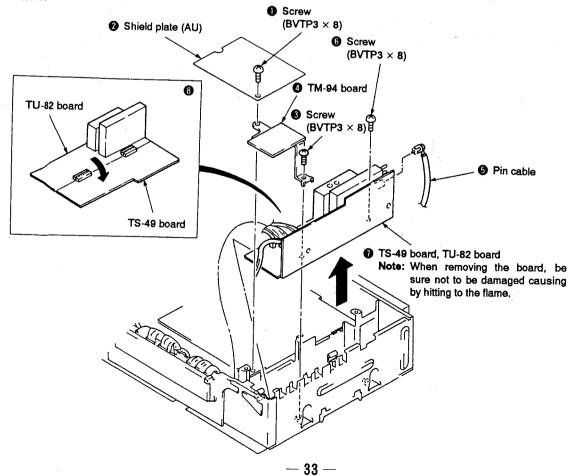
2-6. OPENING OF THE SP-7 BOARD

1) After the preset assembly is removed according to "2-5. REMOVAL OF THE PR-12 BOARD", perform as shown below.

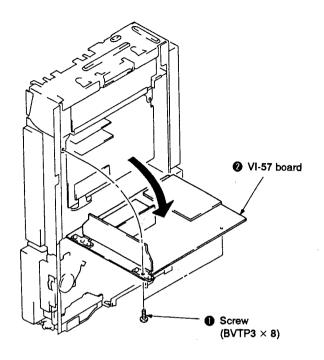


2-7. REMOVAL OF THE TS-49 AND TU-82 BOARDS

 After the SP-7 board is opened according to "2-6. OPENING OF THE SP-7 BOARD", perform as shown below.

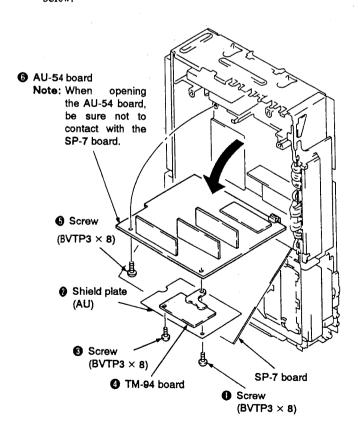


2-8. OPENING OF THE VI-57 BOARD

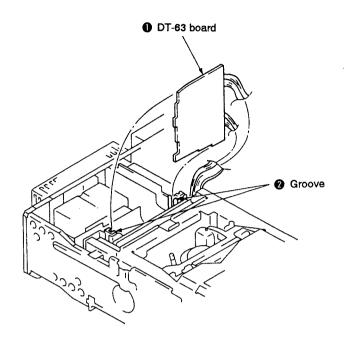


2-9. OPENING OF THE AU-54 BOARD

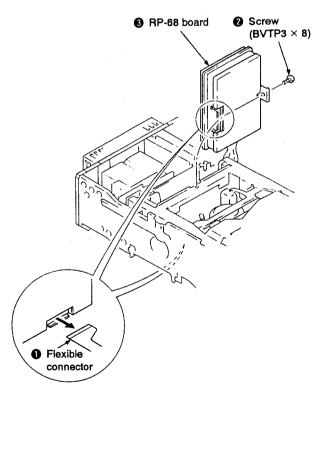
1) After the SP-7 board is opened according to "2-6. OPENING OF THE SP-7 BOARD", perform as shown below.

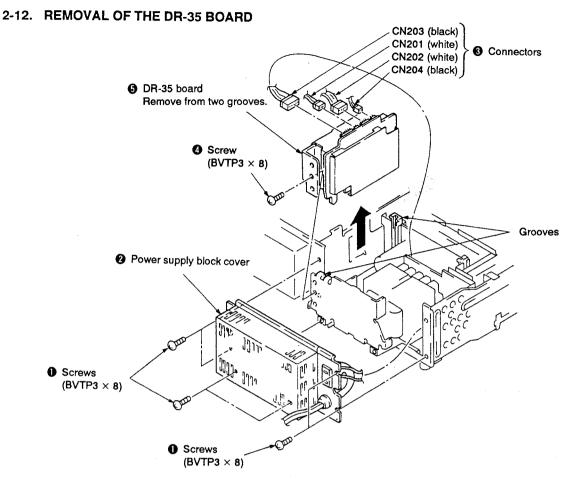


2-10. REMOVAL OF THE DT-63 BOARD



2-11. REMOVAL OF THE RP-68 BOARD



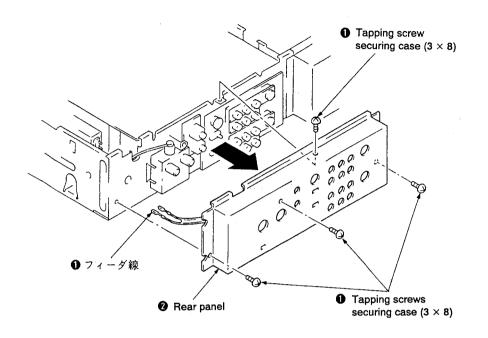


2-13. REMOVAL OF POWER TRANSFORMER (DS-15 BOARD)

1) After the DT-63 board is removed according to "2-10. REMOVAL OF THE DT-63 BOARD", perform as shown below. O Screws 3 Connector $(BVTP3 \times 8)$ CN401 (white) • Power transformer (DS-15 board) 3 Connector CN109 (white)on DT-63 board Connector CN102 (red) on Screws DT-63 board (BVTP3 × 8) DS-15 board Ø nsulator 18 6 Rivets Power supply block cover

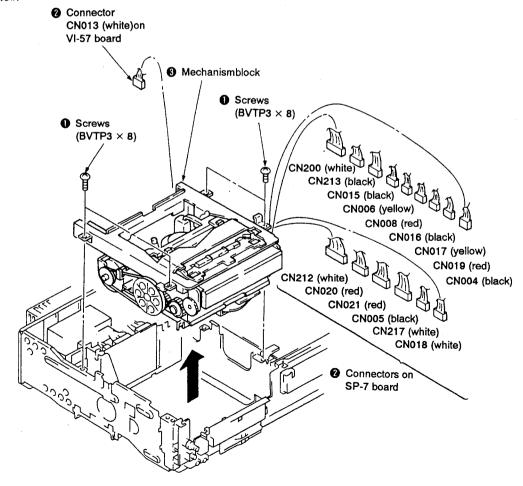
— **35** —

2-14. REMOVAL OF REAR PANEL



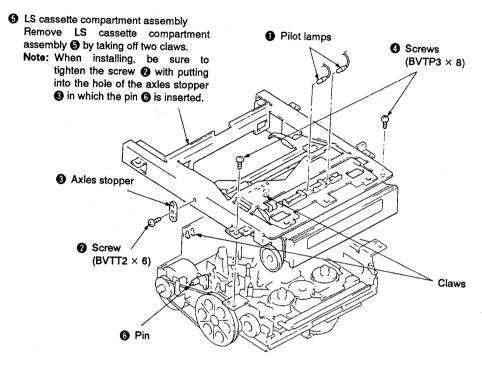
2-15. REMOVAL OF MECHANISM BLOCK

1) After the RP-68 board is removed according to "2-11. REMOVAL OF THE RP-68 BOARD", perform as shown below.



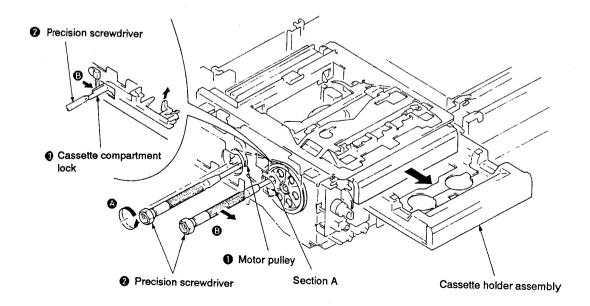
2-16. REMOVAL OF LS CASSETTE COMPARTMENT ASSEMBLY

 After the mechanism block is removed according to "2-15. REMOVAL OF MECHANISM BLOCK", perform as shown below.



2-17. EJECTING WITHOUT APPLYING THE POWER

- Insert the precision screwdriver ② into the motor pulley ①, turn it about 180° in the direction of arrow ② as shown below.
 - **Note**: As the cassette compartment is locked at this time, the pulley may not turn. Never turn the screwdriver forcibly.
- 2) Insert the precision screwdriver ② into the section A as shown below, push the cassette compartment lock ③ in the direction of arrow ⑤ to unlock the cassette compartment.
- 3) Insert the precision screwdriver 2 into the motor pulley 1 again, turn it in the direction of arrow 2 until EJECT operation is completed.



2-18. REPLACEMENT OF CASSETTE HOLDER ASSEMBLY

2-18-1. Removal

- Remove LS cassette compartment assembly according to "2-16. REMOVAL OF LS CASSETTE COMPARTMENT ASSEMBLY". (Hereafter, perform servicing with LS cassette compartment assembly upside down.)
- Tilt the mirror assembly toward the rear side and fix with an adhesive tape.
 (Be sure not to break the claws of the mirror assembly.)
- 3) While rotating the drive gear ② in the reverse direction of arrow ③, remove the main gear assembly ③ from the section A.
- 4)Remove the cassette holder assembly 4 upward.

2-18-2. Installation

- Install the cassette holder assembly (4) keeping parallel to the synchronizing gear assembly (5).
 (For details, described in (i) through (iii) below.)
 - (i) Mesh a half of all teeth numbers of cassette holder assembly **4** racks A with either side of the synchronizing gear assembly **5**.

Note: At this time, front and rear racks A are meshed with the gear simultaneously. And the meshed teeth numbers should be always the same each other.

(ii) Mesh rack A with the other side of the synchronizing gear assembly **5** in the same manner as (i).

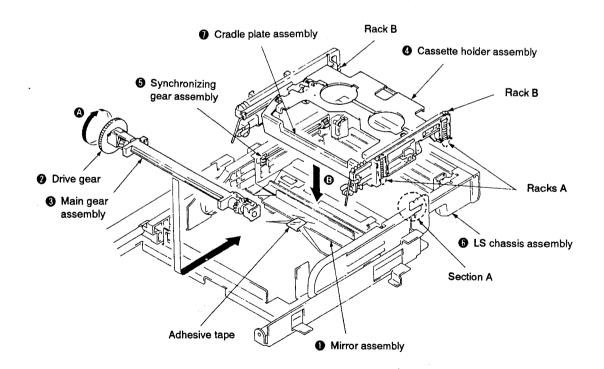
(iii) After confirming that the number of teeth combined of four racks A and the synchronizing gear assembly § is the same, push the cassette holder assembly § in the direction of arrow §.

Note: At this time, confirm that LS chassis assembly of surface (viewed from the bottom side) is horizontal for the cassette holder assembly of rack B. If not, perform (i) through (iii) again.

- 2) Pull out LS chassis assembly 6 toward the front side, insert the main gear assembly 6 into the section A.
- 3) Rotate the drive gear ② in the direction of arrow ③ and combine the both sides of cassette holder assembly ④ rack B with the main gear simultaneously.
- 4) Rotate the drive gear 2 in the direction of arrow 3 and confirm that the cassette holder 3 rises (viewed from the bottom side) easily.

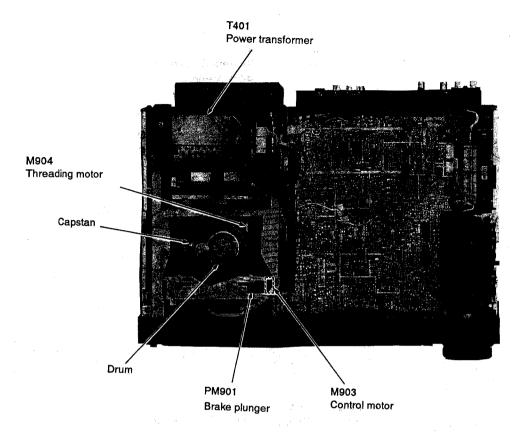
Note: The cassette holder assembly 4 should not be come off. Also when turning the drive gear 2 with LS cassette compartment assembly upside down, be sure to prevent the cradle plate assembly 1 from contacting with the chassis.

5) Peel off the adhesive tape from the mirror assembly ①, and install LS cassette compartment assembly according to the reverse procedure of "2-16. REMOVAL OF LS CASSETTE COMPARTMENT ASSEMBLY".

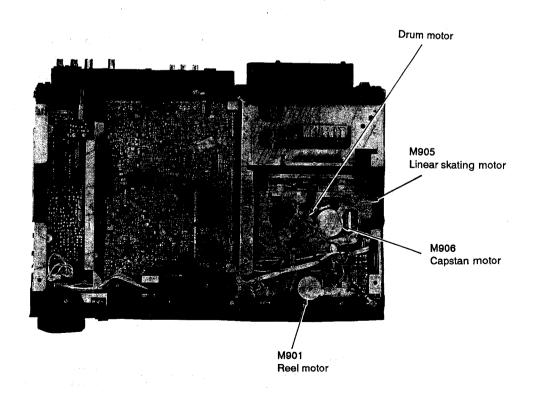


2-19. INTERNAL VIEWS

- Upper side -

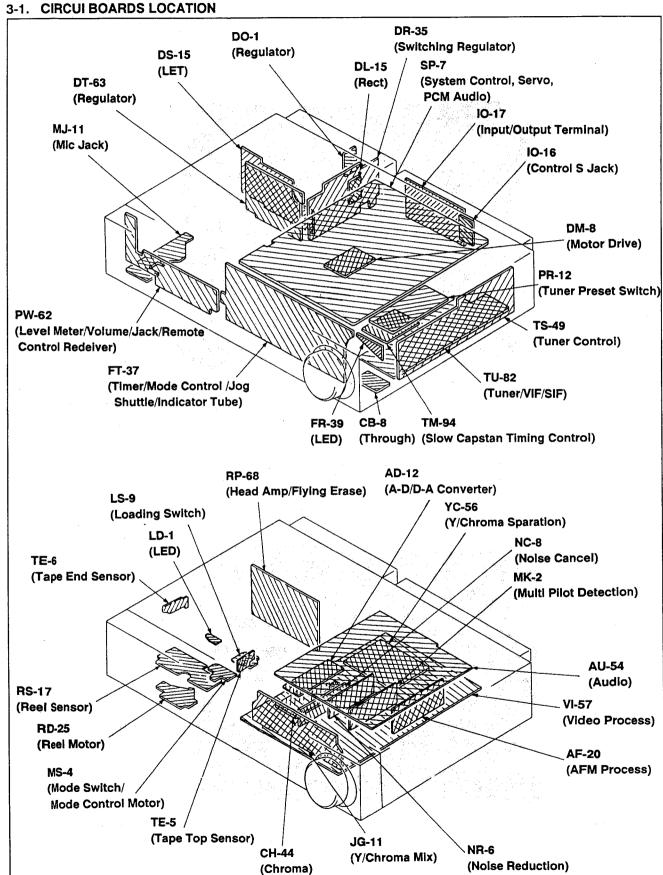


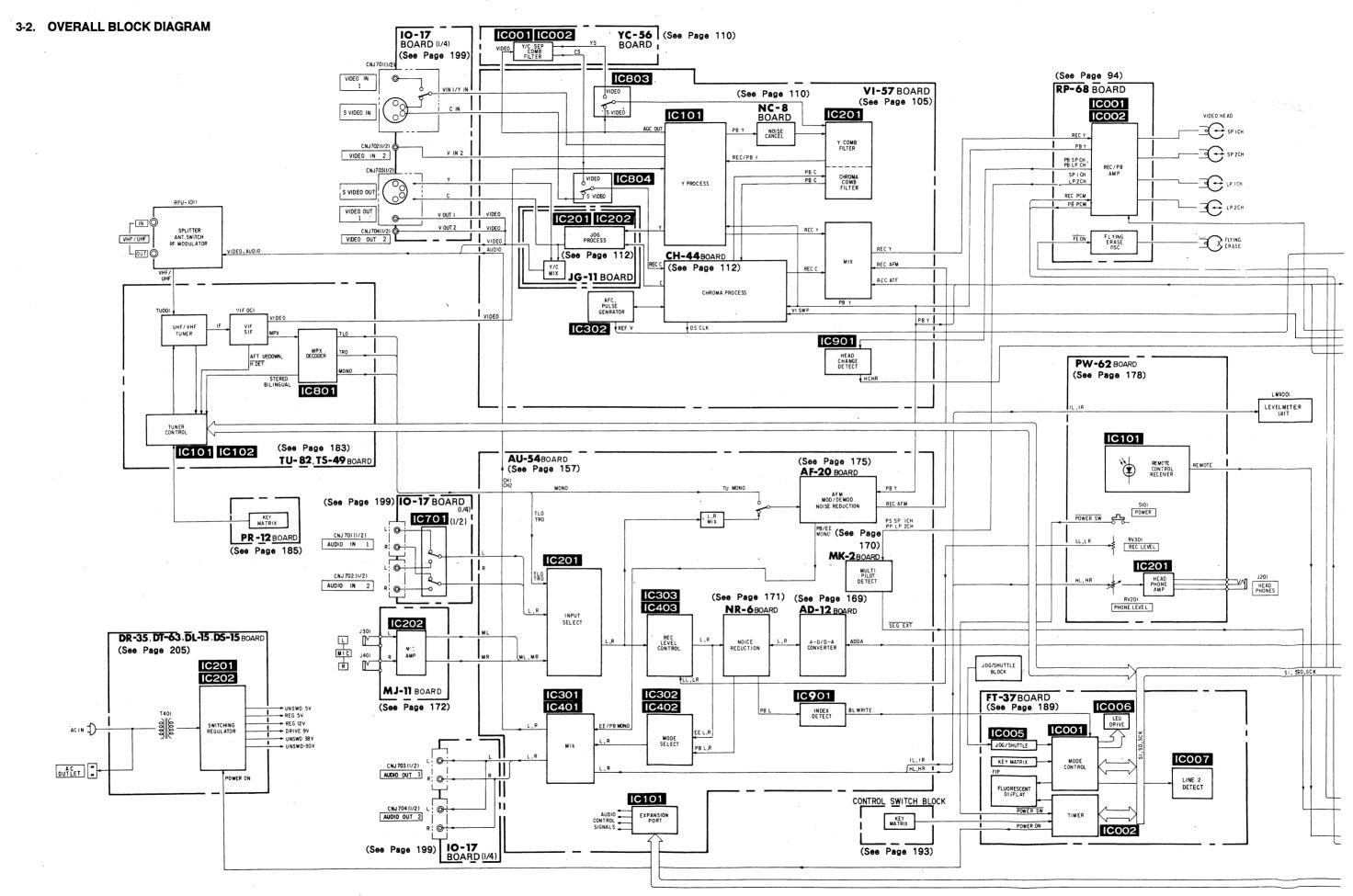
- Bottom side -

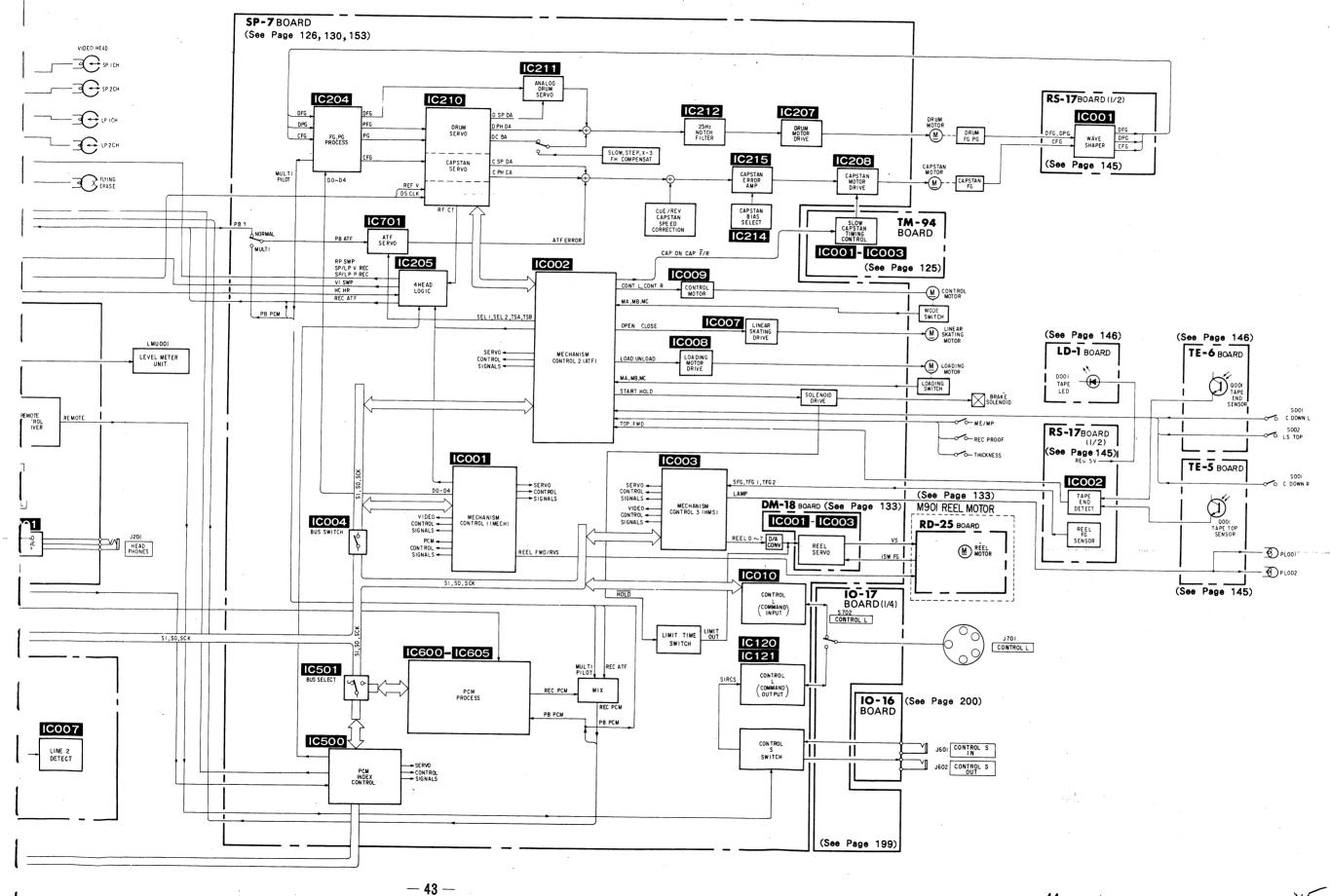


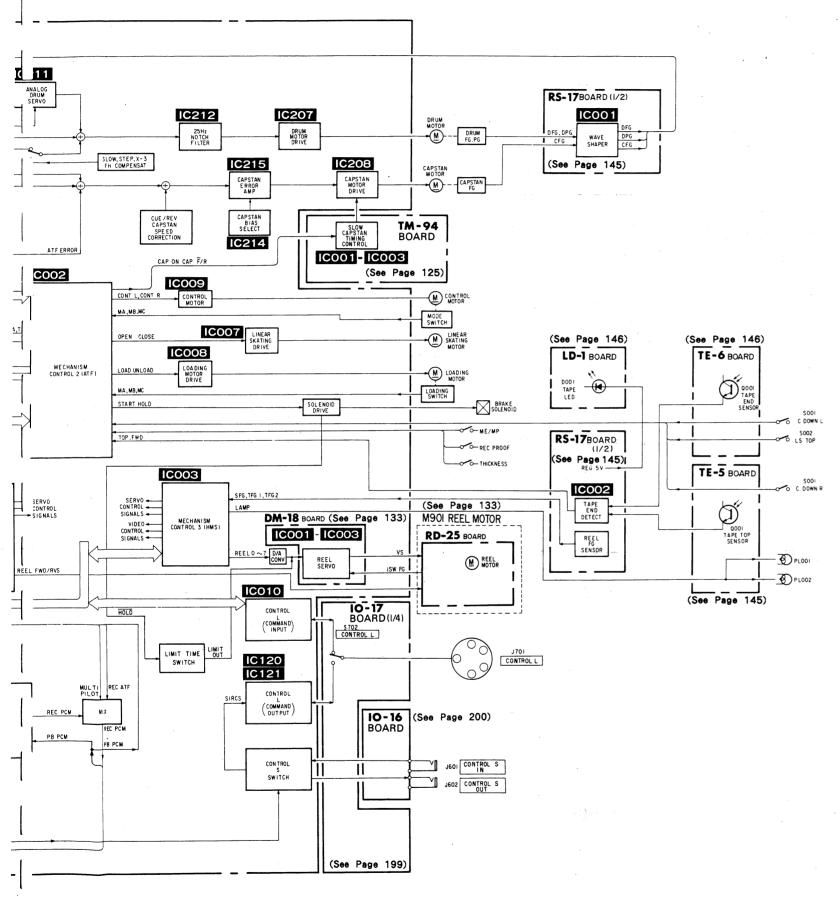


SECTION 3 **DIAGRAMS**



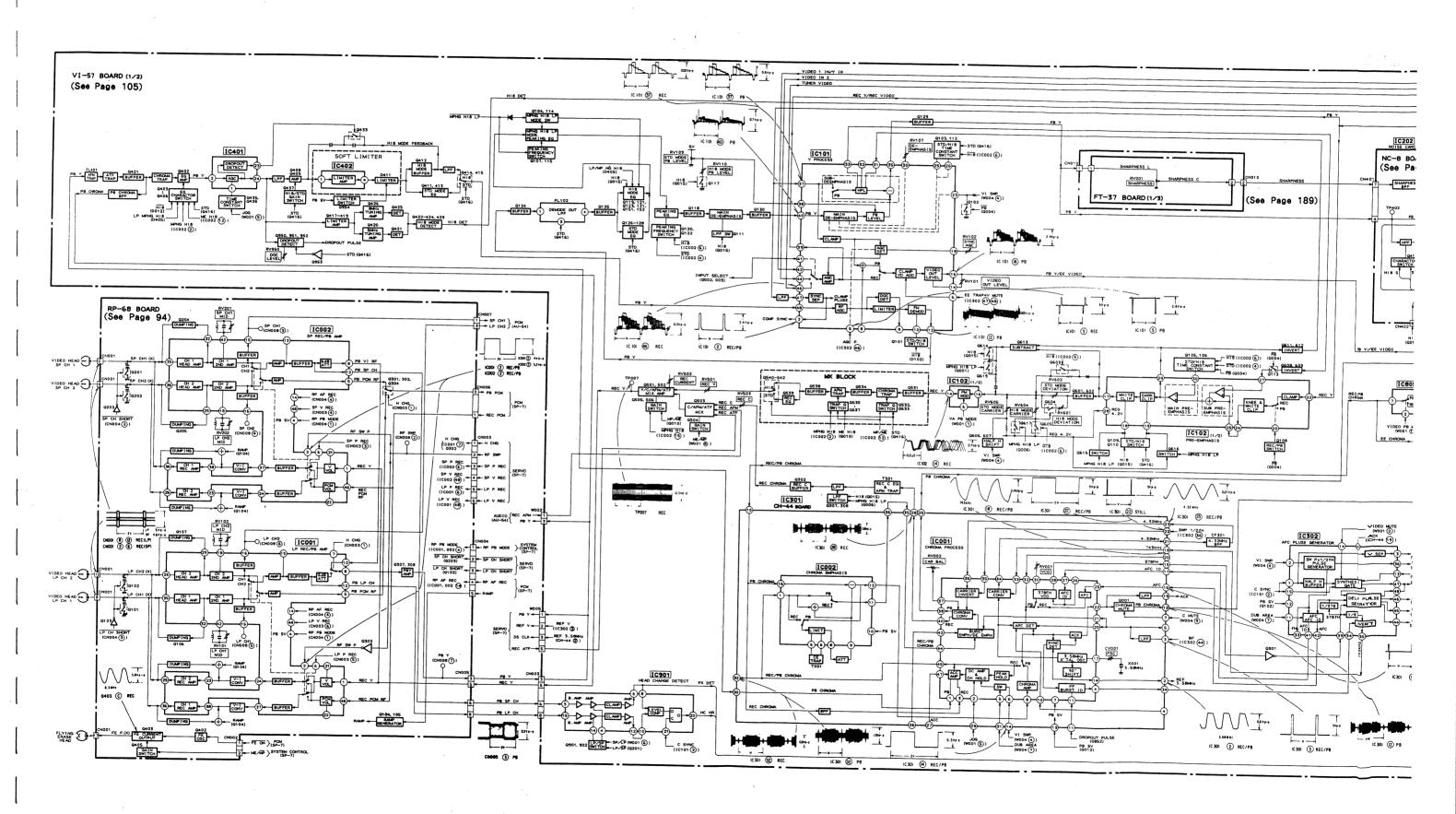


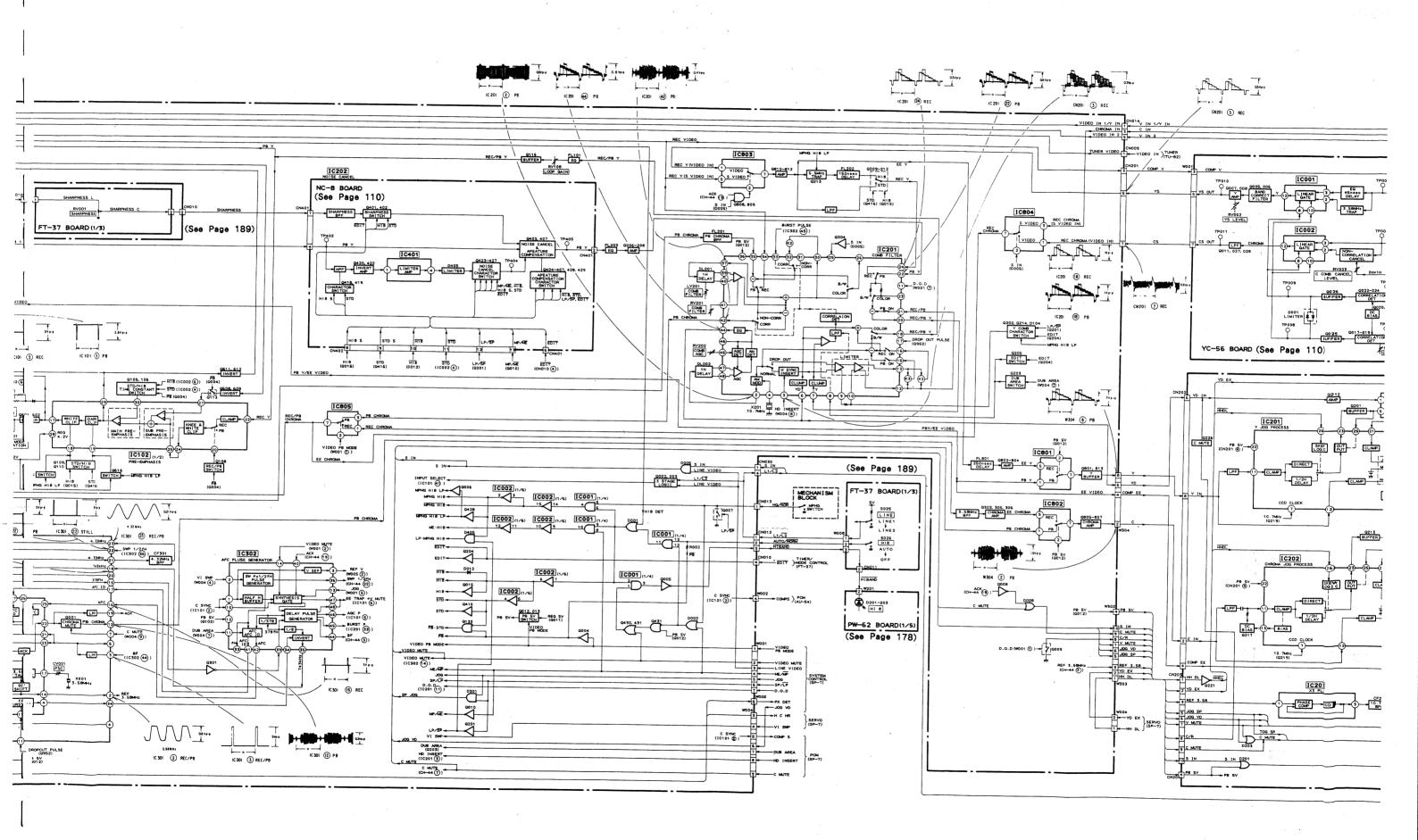


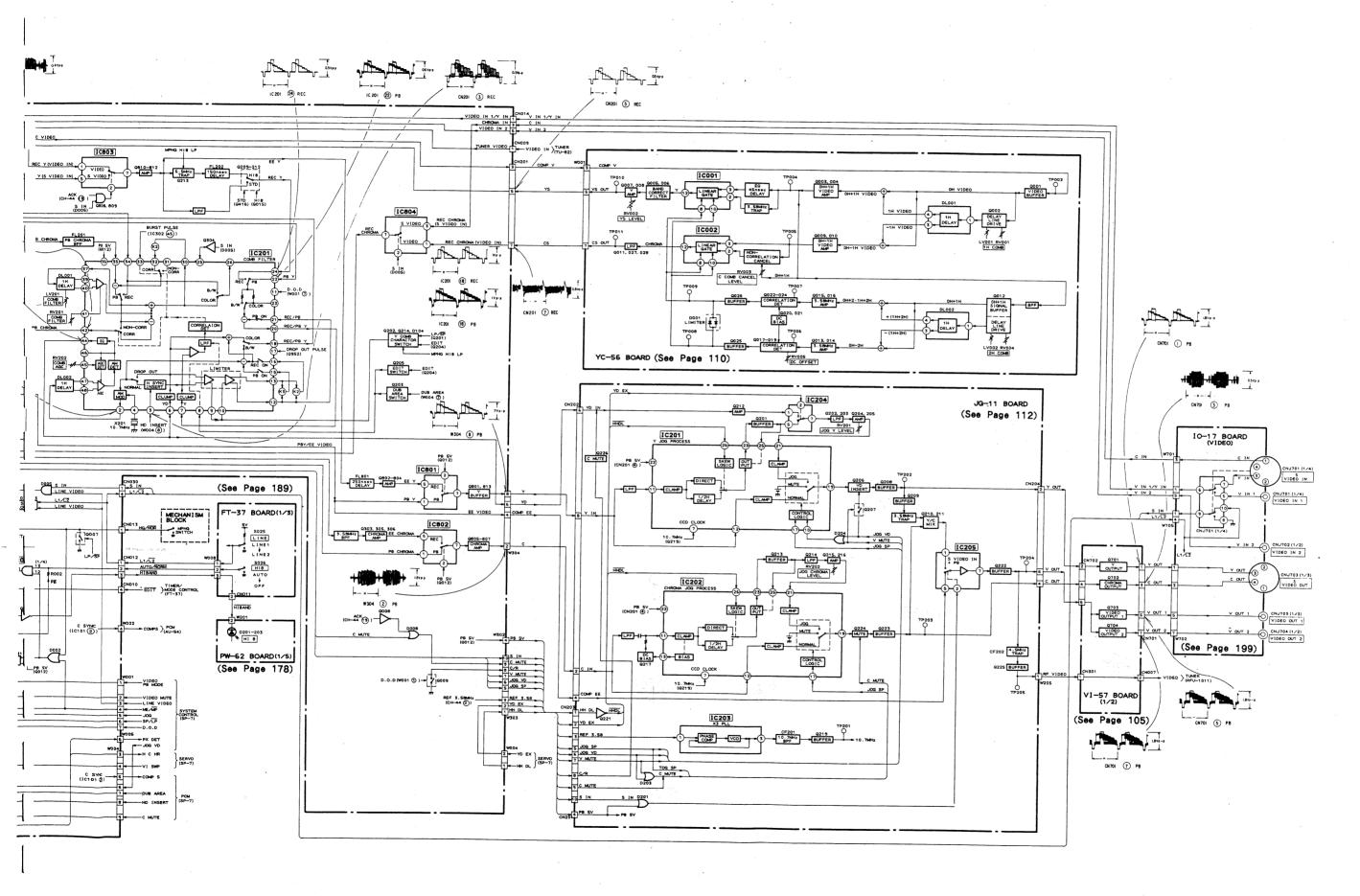


V-S900

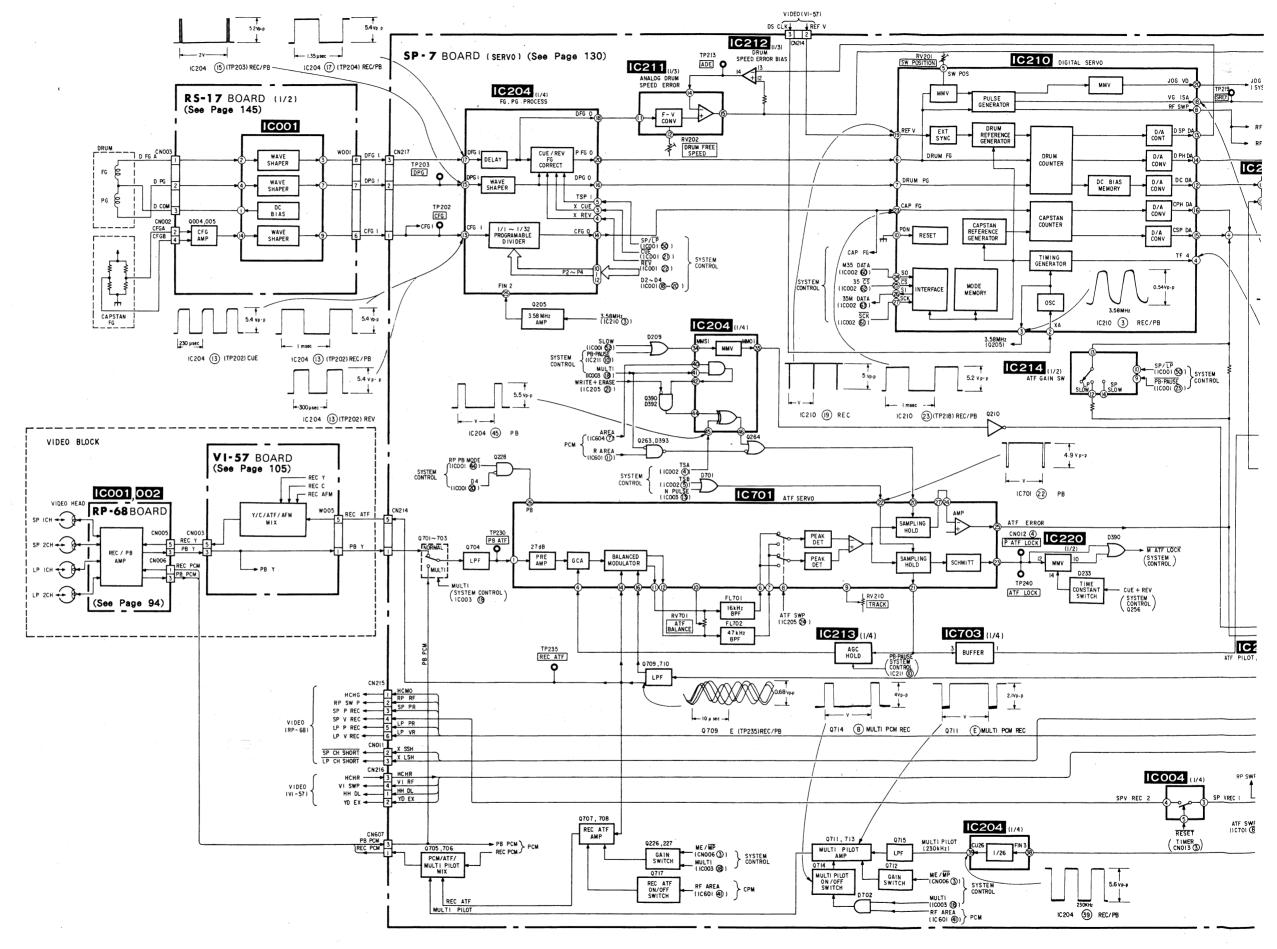
3-3. VIDEO BLOCK DIAGRAM

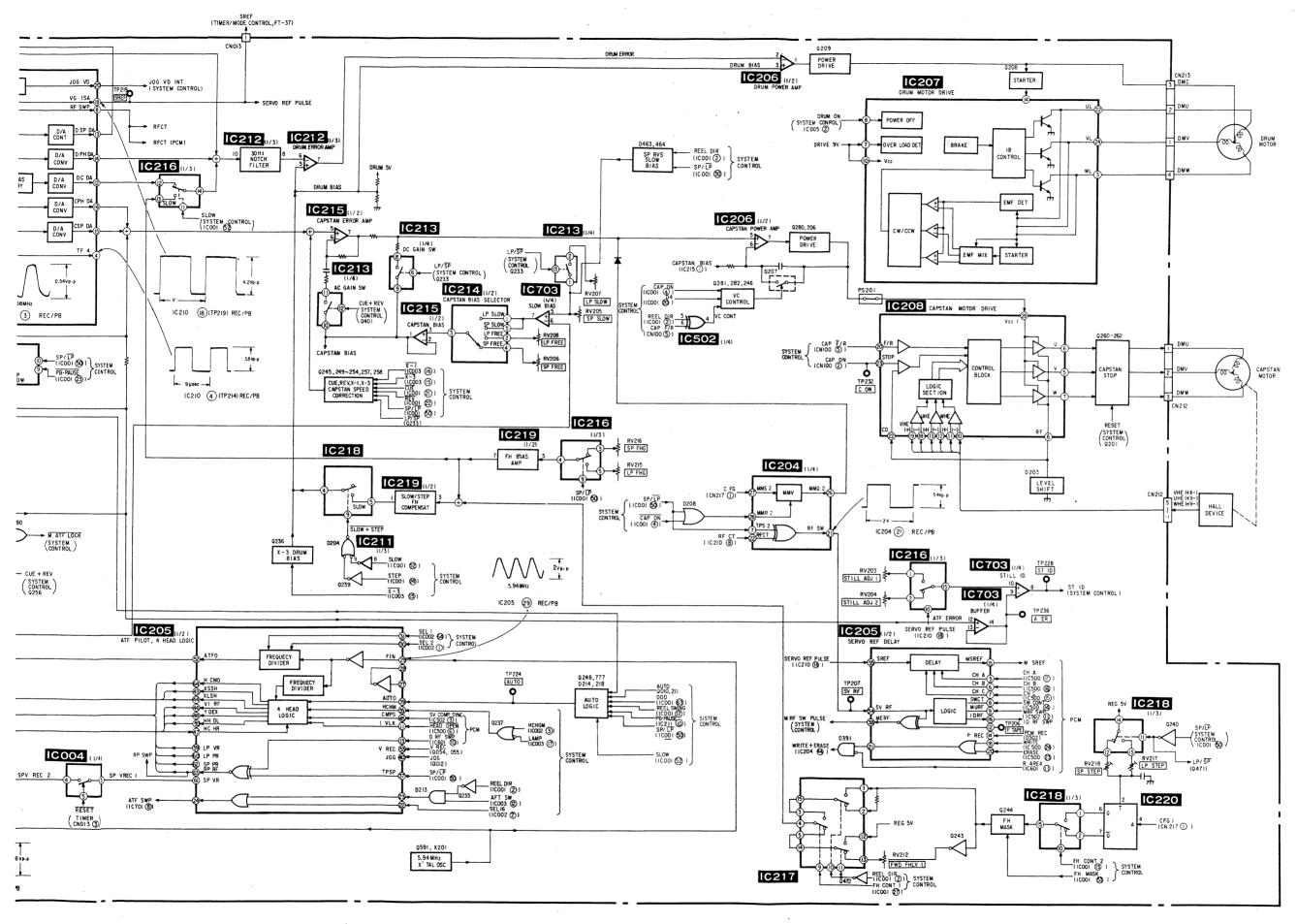


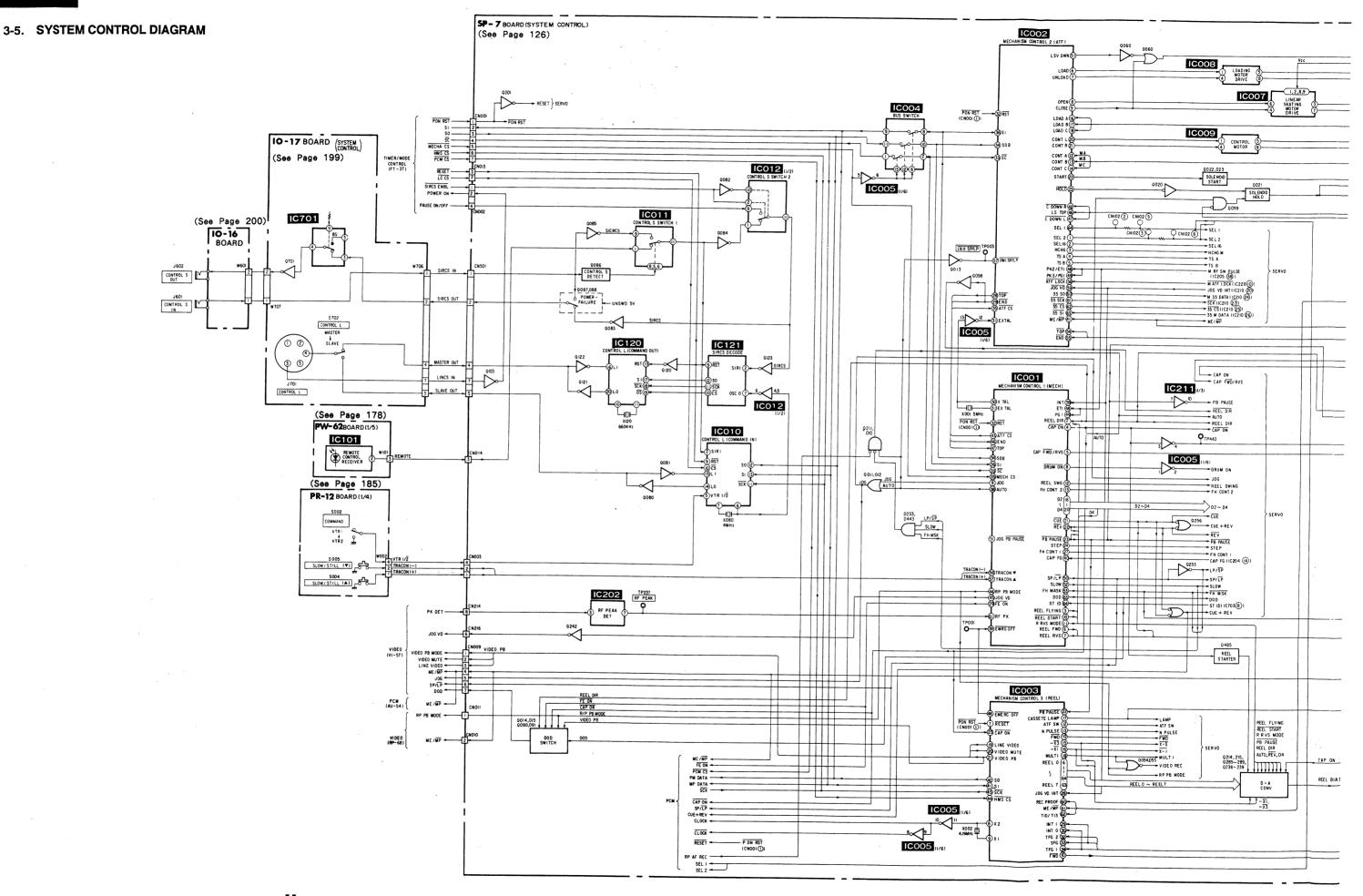


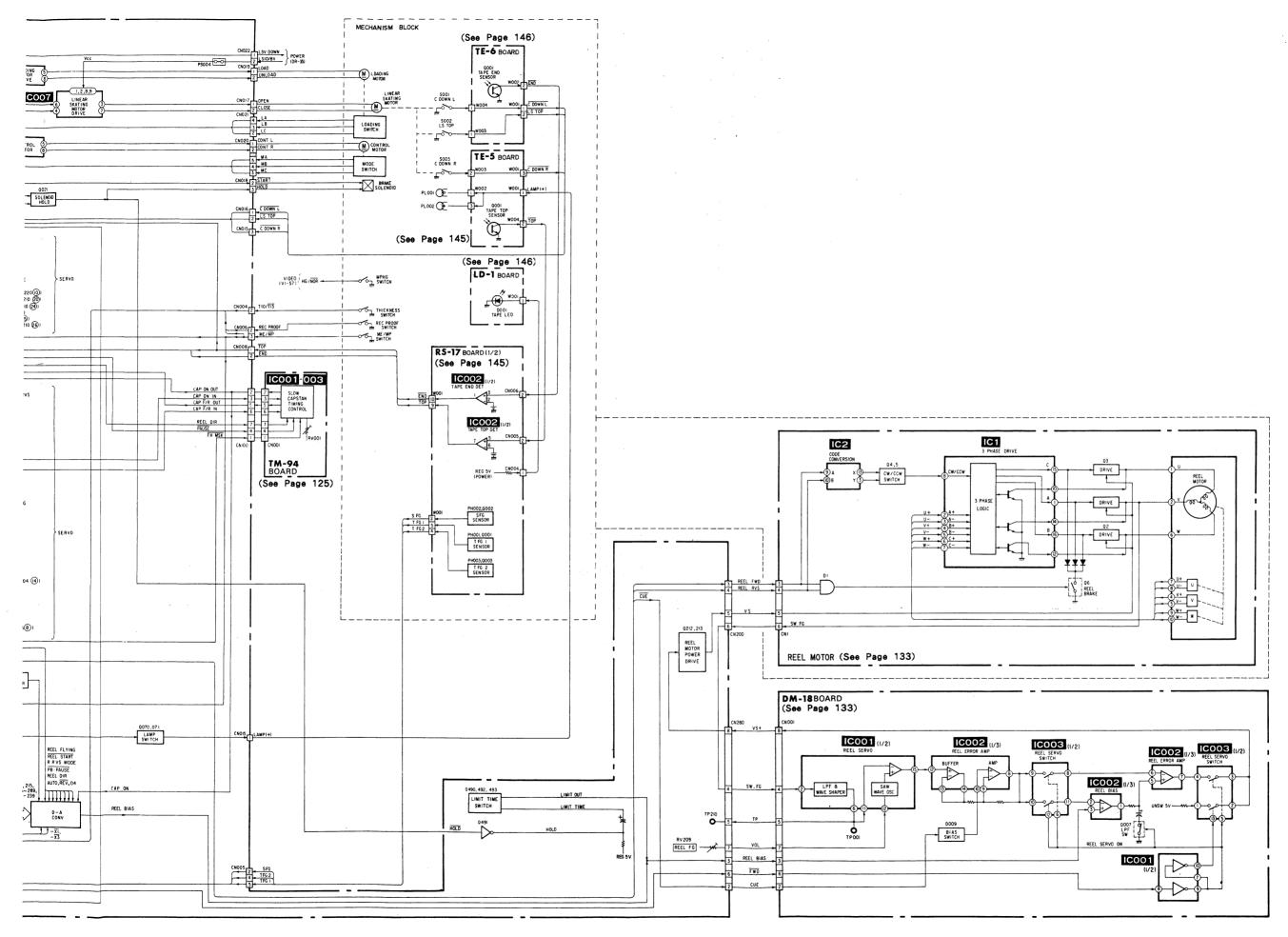


3-4. SERVO BLOCK DIAGRAM









3-6. SYSTEM CONTROL — VIDEO BLOCK INTERFACE

| | | Mode | СТОР | | DE111 | 550 | REC • | AUDIO | AUDIO | | PB • | | | | - | CUE | REV | SLOW | SLOW | FWD | RVS |
|-------------|-----|----------------------------------|---------|----------|-----------|----------|------------|----------|--------------|-----------|-------|----|-----|-----|-----|-----------|-------|----------------|------------------|-----------------|-----------------|
| Signal name | 1/0 | Pin No. | STOP | FF | REW | REC | PAUSE | DUB | DUB PAUSE | РВ | PAUSE | ×1 | -×1 | × 2 | -×2 | (× 9) | (-×7) | (1/5, 1/10) | (-1/5, -1/10) | INDEX SEARCH | INDEX SEARCH |
| VIDEO PB | 0 | Pin ② of IC003 | L | L | L | L | L | Н | Н | Н | Н | Н | Н | H | Н | Н | Н | Н | Н | Ή | Н |
| VIDEO MUTE | 0 | Pin 20 of IC003 | L | L | L | L | L | L | L | L | L | ·L | L | L | L | L | L | L | L | L | L |
| JOG | 0 | Pin 9 of IC003 | L | L | L | L | L | Н | Н | L | , H | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н |
| DOD | 0 | Pin 🕲 of IC003 | L | L | L | L | L | Н | L | L | L | L | Н | Н | Н | Н | Н | L | Н | Н | Н |
| ME/MP | 0 | Pin ③ of IC006 | "L" wi | hen usin | g MP ta | pe or M | PHG tape | е. | | | | | | | | | L | | | | |
| SP/LP | 0 | Pin 🐿 of ICO01 | "H" w | hen reco | ording in | SP mod | e, or play | ing back | k in SP | mode. | | | | | | | | | | | |
| JOG VD | 0 | Pin 46 of ICO01 | | | "H" | | | VD , | pulse | "H" | | | | | 7 | /D pulse |) | | | | |
| LINE VIDEO | 0 | Pin (9) of ICO01 | Accordi | ng to in | put selec | ting. TU | NER··· "L | ", LINE | or SIMU | L··· "H". | | | | | | | | | | | |
| HG∕NOR | 0 | Pin ① of CN013 on VI-57 board | "L" wh | nen usin | g MP tap | oe or Mi | E tape. | | | | | | | | | v D puise | | | | | |
| RP PB MODE | 0 | Pin @ of IC001 | Н | Н | Н | L | L | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | н | Н | Н |

3-7. SYSTEM CONTROL — SERVO (CAPSTAN MOTOR) BLOCK INTERFACE

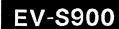
| | | Mode | STOP | | DEM | DE0 | REC • | AUDIO | AUDIO | | РВ• | | | | | CUE | REV | SLOW | SLOW | FWD | RVS |
|-------------|-----|----------------------|------|-----|-----|-----|-------|-------|--------------|-----|-------|-----|-----|-----|-----|-----|-------|----------------|------------------|-----------------|-----------------|
| Signal name | 1/0 | Pin No. | 3108 | FF | REW | REC | PAUSE | DUB | DUB PAUSE | PB | PAUSE | ×1 | -×1 | × 2 | -×2 | | (-×7) | (1/5, 1/10) | (-1/5, -1/10) | INDEX SEARCH | INDEX SEARCH |
| CAP ON | 0 | Pin @ of IC001 | Н | Н | Н | L | Н | L | Н | L | Н | L | L | L | L | L | L | *1 | *1 | L | L |
| CAP FWD/RVS | 0 | Pin ⑤ of ICO01 | L | L | L | L | L | L | L | L | L | L | Н | L | Н | L | Н | *1 | *1 | L | Н |
| D0~D4 | 0 | Pins ® to ® of CN001 | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "2" | "2" | "9" | "7" | "1" | "1" | *2 | *2 |
| CUE | 0 | Pin ② of ICO01 | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | L | Н | Н | H | Н | Н |
| REV | 0 | Pin 29 of IC001 | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | L | Н | Н | Н | Н |
| PB PAUSE | 0 | Pin ② of IC001 | Н | Н | Н | Н | Н | Н | L | Н | L | Н | Н | Н | Н | Н | Н | L | L | Н | Н |
| -×1 | 0 | Pin ® of IC003 | Н | Н | Н | н | Н | Н | Н | Н | Н | Н | L | Н | Н | Н | Н | Н | н | Н | Н |
| <u>−×3</u> | 0 | Pin ® of IC003 | . Н | H- | Н | H. | H, | H | Н | Н | Н | Н | Н | Н | L | Н | Н | Н | Н | Н | Н |

D4 MSB Decimal

3-8. SYSTEM CONTROL — SERVO (DRUM MOTOR) BLOCK INTERFACE

| | - | Mode | STOP | FF | REW | DEC | REC • | AUDIO | AUDIO | DD. | PB• | 4 | | _ | | CUE | REV | SLOW | SLOW | FWD | RVS |
|-------------|-----|-----------------|------|----|------|-----|-------|-------|--------------|-----|-------|-----|-----|-----|-----|-----|-------|----------------|------------------|-----------------|-----------------|
| Signal Name | 1/0 | Pin No. | 3106 | FF | HEVV | REC | PAUSE | DUB | DUB PAUSE | PB | PAUSE | × 1 | -×1 | × 2 | -×2 | | (-×7) | (1/5, 1/10) | (-1/5, -1/10) | INDEX SEARCH | INDEX SEARCH |
| DRUM ON | 0 | Pin ® of IC001 | Н | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L | . L |
| STEP | 0 | Pin 29 of IC001 | L | L | L | L | ٦ | L | L | L | L | L | L | L | L | L | L | *1 | *1 | L | L |
| FH CONT1 | 0 | Pin ② of IC001 | L | L | ٦ | L | L | L | L | L | L | L | L | L | L | L | L | *1 | ·* 1 | L | L |
| FH CONT2 | 0 | Pin ® of IC001 | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L | *1 | *1 | L | L |
| SLOW | 0 | Pin ② of IC001 | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L | Н | Н | L | L |
| FH MASK | 0 | Pin 🕸 of IC001 | н | Н | Н | Н | Н | Н | Н | Н | Н | Н | н | Н | Н | Н | Н | *1 | *1 | Н | Н |

^{*1.} Pulse output *2. NTSC "25" to "24"



3-9. SYSTEM CONTROL — SERVO (REEL MOTOR) BLOCK INTERFACE

| | | Mode | STOP | FF | REW | REC | REC • | AUDIO | AUDIO | РВ | PB• | 1 | 1 | × 2 | | CUE | REV | SLOW | SLOW | FWD | RVS |
|-------------|-----|-------------------------------|---------|----------|-----------|---------|----------|--------|--------------|---------|-----------|----------|----------|------|-----|-------|-------|----------------|------------------|-----------------|-----------------|
| Signal Name | 1/0 | Pin No. | 310 | FF | HEW | NEC | PAUSE | DUB | DUB PAUSE | РВ | PAUSE | ×1 | -×1 | × 2 | -×2 | (× 9) | (-×7) | (1/5, 1/10) | (-1/5, -1/10) | INDEX SEARCH | INDEX SEARCH |
| REEL FWD | 0 | Pin 6 of IC001 | L | Н | L | Н | L | Н | L | Н | L | Н | L | Н | L | Н | L | *1 | *1 | Н | L |
| REEL RVS | 0 | Pin ⑦ of IC001 | L | L | Н | L | L | L | L. | L | L | L | Н | L | Н | L | Н | *1 | *1 | L | Н |
| CUE | 0 | Pin ② of ICO01 | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | L | Н | Н | Н | Н | Н |
| REEL DIR | 0 | Pin ② of IC001 | H/L | L | Н | L | L | L | L | L | H/L | L | Н | L | Н | L | Н | L | Н | L | Н |
| REEL FLYING | 0 | Pin ③ of IC001 | Normall | y "L". | "H" puls | se when | shifting | STOP → | FF/RV | S mode. | | | | | | | | | | | |
| REEL START | 0 | Pin @ of IC001 | Normall | у "H". | "L" puls | se when | shifting | STOP → | FF/RV | S mode. | | | | | | | | | | | |
| R RVS MODE | 0 | Pin ① of IC001 | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L |
| REEL SWG | 0 | Pin ® of ICO01 | Normali | y "L". ' | 'H" pulse | e when | changing | FORWAR | RD ≠ RE | VERSE r | unning di | rection. | | | | | | | | | |
| REEL 0~7 | 0 | Pins ① to ⑥, ⑥ and ⑥ of IC003 | "70" | "96" | "96" | "54" | "54" | "54" | "54" | "54" | "70" | "54" | * 2 | "70" | *2 | *3 | *3 | "70" | "63" | "A6" | "9C" |
| FWD | 0 | Pin 10 of IC003 | Н | Н | Н | L | Н | L | Н | L | Н | L | H | L | Н | L | Н | Н | Н | L | Н |
| PB • PAUSE | .0 | Pin ② of ICO01 | Н | Н | Н | Н | н | L | Н | L | Н | Н | Н | Н | Н | Н | Н | L | L | Н | Н |
| CAP ON | 0 | Pin @ of IC001 | Н | Н | Н | L | н | L | Н | L | Н | L | L | L | L | L | L | *1 | *1 | L | L |

REEL 7MSB REEL 0LSB BCD code

3-10. SYSTEM CONTROL — SERVO (ATF SERVO) BLOCK INTERFACE

| | · | Mode | STOP | FF | REW | REC | REC • | AUDIO | AUDIO DUB | PB | PB• | × 1 | -×1 | × 2 | -×2 | CUE | REV | SLOW (1/5, | SLOW (-1/5, | FWD INDEX | RVS INDEX |
|---------------|-----|-------------------------------|--------|----------|-----------|----------|---------|-------|--------------|-----|-------|-----|-------|----------|-----|----------|--------------|---------------|----------------|--------------|--------------|
| Signal name | 1/0 | Pin No. | 0.01 | | 11211 | 1120 | PAUSE | DUB | PAUSE | , , | PAUSE | ^ 1 | , ^ 1 | ^2 | ^2 | (×9) | $(-\times7)$ | 1/10) | | SEARCH | |
| ATF SW | 0 | Pin 10 of IC003 | L | L | · L | L | L | L | *1 | L | *1 | L | L | L | L | L | L | *1 | *1 | L | L |
| SEL16 | 0 | Pin ② of IC002 | L | L | L | *2 | L | *2 | L | *2 | L | * 2 | *2 | *2 | *2 | *2 | *2 | * 2 | *2 | L | L |
| TSA | 0 | Pin 4 of IC002 | L | L | L | L | L | *2 | L | *2 | L | * 2 | *2 | *2 | *2 | L | L | L | L | Н | Н |
| TSB | 0 | Pin ⑤ of IC002 | L | L | L | L | L | *2 | L | *2 | L | *2 | *2 | *2 | *2 | L | L | L | L | L | L |
| MULTI | 0 | Pin ® of IC003 | Normal | ly "L". | "H" who | en multi | PCM me | ode. | | | | | | <u> </u> | | <u> </u> | | | | | |
| N PULSE | 0 | Pin ® of IC003 | L | L | L | L | L | L | *1 | L | *1 | L | L | L | L | L | L | *1 | *1 | L | L |
| RP PB MODE | 0 | Pin 4 of ICO01 | Н | Н | Н | L | L | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н |
| SEL 1 | 0 | Pin 69 of IC002 | H. | Н | Н | *2 | *2 | *2 | *2 | *2 | * 2 | *2 | *2 | *2 | *2 | *2 | *2 | * 2 | * 2 | Н | Н |
| SEL 2 | 0 | Pin ① of IC002 | Н | H. | Н | * 2 | *2 | *2 | *2 | *2 | * 2 | * 2 | *2 | *2 | *2 | *2 | *2 | * 2 | * 2 | Н | Н |
| M RF SW PULSE | ı | Pins (®) and (®) of IC002 | H/L | Field s | ync pulse | | | | | | | | | | | • | | | | I | |
| JOG VD INT | ı | Pin \$9 of IC001 and IC002 | L | Pulse ii | nput | | | | | | | | | | | | | | | | |
| ME/MP | 0 | Pin ③ of CN006 | "L" w | hen usin | g MP ta | pe or M | PHG tap | e. | | | | | | | | | | | | | |

^{*1.} Pulse output

^{*1.} Pulse output

^{*2.} Changes with the cycle of SFG

^{*3.} Changes with the tape speed (SP/LP)

^{*2.} Pulse output with ATF sequence

3-11. SYSTEM CONTROL — SERVO (STILL) BLOCK INTERFACE

| | | Mode | STOP | FF | REW | REC | REC • | AUDIO | AUDIO DUB | PB | ₽В∙ | × 1 | -×1 | × 2 | -×2 | CUE | REV | (1/5 | SLOW (-1/5, | RVS INDEX |
|-------------|-----|----------------|----------|------|-----|-----|-------|-------|--------------|----|-------|-----|-----|-----|-----|------|--------------|-------|----------------|------------------|
| Signal name | 1/0 | Pin No. | | Ì | | | PAUSE | DUB | PAUSE | | PAUSE | | | ~ _ | ~ = | (×9) | $(-\times7)$ | 1/10) | | SEARCH |
| RF PK | l i | Pin 6 of IC001 | Pulse i | nput | | | | | | | | | | | | | | | | L |
| STID | 1 | Pin 🚱 of IC001 | Pulse ii | nput | | | | | | | | | | | | | | | | |

3-12. SYSTEM CONTROL — SERVO (HEAD SELECTING) BLOCK INTERFACE

| | | Mode | STOP | FF | REW | REC | REC • | AUDIO | AUDIO | PB | PB• | v 1 | | 0 | | CUE | REV | 1 | SLOW | FWD | RVS |
|-------------|-----|-------------------|---------|---------|-----------|----------|----------|------------|--------------|-------|-------|-----|-----|-----|-----|-------|-------|----------------|------------------|---------------------------------------|-----------------|
| Signal name | 1/0 | Pin No. | 310 | FF | NEW | HEC | PAUSE | DUB | DUB PAUSE | РВ | PAUSE | × 1 | -×1 | × 2 | -×2 | (× 9) | (-×7) | (1/5, 1/10) | (-1/5, -1/10) | INDEX SEARCH | INDEX SEARCH |
| AUTO | 0 | Pin 39 of IC001 | L | L | L | L | L | L | L | L | L | L | L | L | L | Н | Н | *1 | *1 | Н | Н |
| LAMP | 0 | Pin ① of IC003 | Normall | у "H". | Pulse out | tput whe | n thread | ling/unth | nreading. | | · | | | | | | | | | · · · · · · · · · · · · · · · · · · · | |
| SP/LP | 0 | Pin 🐿 of ICO01 | Output | when re | ecording | in SP m | ode or p | olaying ba | ack in Si | mode. | | | | | | | | | | | |
| HCHG | 0 | Pin ③ of IC002 | *1 | *1 | *1 | *1 | *1 | *2 | *1 | * 2 | *1 | * 2 | *2 | * 2 | *2 | * 2 | *2 | * 2 | * 2 | *2 | *2 |
| V REC | 0 | Collector of Q054 | L | L | L | Н | L | L | L | L | L | L | L | L | L | L | L | L | L | L | L |

^{*1.} Depending upon a tape speed (SP/\overline{LP}). SP..."H", LP..."L".

3-13. SYSTEM CONTROL — SERVO (AND OTHERS) BLOCK INTERFACE

| | | Mode | STOP | FF | REW | REC | REC • | AUDIO | AUDIO | РВ | PB · | 4 | | | | CUE | REV | SLOW | SLOW | FWD | RVS |
|-------------|-----|-----------------|------|------------|------|-----|------------|-------|--------------|-----|------------|-----|-----|-----|-----|-------|-------|----------------|------------------|-----------------|-----------------|
| Signal name | 1/0 | Pin No. | 310 | FF | NEVV | REC | PAUSE | DUB | DUB PAUSE | РВ | PAUSE | × 1 | -×1 | × 2 | -×2 | (× 9) | (-×7) | (1/5, 1/10) | (-1/5, -1/10) | INDEX SEARCH | INDEX SEARCH |
| M ATF LOCK | ı | Pin So of IC002 | | *1 | *1 | | | | | * 2 | | * 2 | *2 | *2 | *2 | *1 | *1 | | | *1 | *1 |
| CAP FG | 1 | Pin @ of IC001 | | Indefinite | | *1 | Indefinite | *1 | Indefinite | *1 | Indefinite | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 |
| J0G | 0 | Pin 9 of IC001 | L | L | L | L | L | Н | н | L | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н |

^{*1.} Pulse input

^{*2.} Pulse output

^{*2. &}quot;L" when ATF servo is phase locked.



3-14. SYSTEM CONTROL — MD BLOCK INTERFACE

| | | Mode | STOP | FF | REW | REC | REC • | AUDIO | AUDIO | РВ | РВ• | V 1 | | × 2 | | CUE | REV | SLOW | SLOW | FWD | RVS |
|-------------|-----|---------------------------|------------|----------|-----------|-----------|------------|----------|--------------|----------|------------|-----------|-----------|---------|----------|-----------|--------------|----------------|------------------|-----------------|-------|
| Signal name | 1/0 | Pin No. | 310 | FF | LEW | REC | PAUSE | DUB | DUB PAUSE | РВ | PAUSE | ×1 | -×1 | × 2 | -×2 | (× 9) | $(-\times7)$ | (1/5, 1/10) | (-1/5, -1/10) | INDEX SEARCH | SEARC |
| CC DOWN L | ı | Pin ① of IC002 | "H" wi | hen the | cassette | compartr | ment is o | oen. "L" | when th | ne casse | tte compa | artment i | s down. | | | | | | | | |
| LS TOP | 1 | Pin 6 of IC002 | "L" w | hen cas | sette com | partmen | nt is oper | . "H" | in all the | other | conditions | i. | | | | | | | | | |
| OPEN | 0 | Pin ® of IC002 | Normal | ly "L". | "H" who | en casse | ette comp | artment | is open. | | | - | | | | | | | | | |
| CLOSE | 0 | Pin 9 of IC002 | Normal | ly "L". | "H" who | en casse | ette comp | artment | is closed | i. | | | | | | | | | | | |
| LOAD | 0 | Pin 6 of IC002 | Normall | ly "L". | "H" who | en tape | threading | | | | | | | | | | | | | | |
| UNLOAD | 0 | Pin ⑦ of IC002 | Normali | ly "L". | "H" who | en tape | unthreadi | ng. | | | | | | | | | | | | | |
| LA~LC | ı | Pins ® to ® of IC002 | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" | "3" |
| CONTL | 0 | Pin 20 of IC002 | Normall | y "L". | "H" whe | en shifti | ng to me | chanism | mode. | | | | | | | | J | | | | |
| CONTR | 0 | Pin ② of IC002 | Normali | y "L". | "H" whe | en shifti | ng to me | chanism | mode. | | | | | | | | | | | | |
| MA~MC | ı | Pins 10 to 14 of IC002 | "3" | "6" | "6" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" | "1" |
| START | 0 | Pin ② of IC002 | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | . н | Н | Н | Н |
| HOLD | 0 | Pin ② of IC002 | Н | L | L | Н | Н | Н | Н | H, | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н | Н |
| REC PROOF | ı | Pin 60 of IC002 | "L" wh | hen reco | rding ena | ble cass | sette tape | is inse | rted. | - | | | ! | | L | 1 | | | | | |
| ME/MP | ı | Pin fi of IC002 | "L" wh | nen usin | g MP tar | oe or M | IPHG tape |). | | | | | | | | | | | | | |
| T10/T13 | ı | Pin ๗ of IC002 | "L" wh | nen usin | g the tap | e of 13 | 3 µm thic | kness | | | | | | | | | | | • | | |
| TFG1 | 1 | Pins 30 and 30 of ICO02 | Indefinite | *1 | *1 | *1 | Indefinite | *1 | Indefinite | *1 | Indefinite | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 |
| TFG2 | ı | Pin ② of IC002 | Indefinite | *1 | *1 | *1 | Indefinite | *1 | Indefinite | *1 | Indefinite | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 |
| TOP | ı | Pin 🛭 of IC002 | Normally | y "H". | "L" at t | ape end | | | | 47 | | | | | | | | | | | |
| END | ı | Pin So of IC002 | Normally | y "H". | "L" at t | ape end | l. Wher |) both | signals ar | e "H", | cassette | loaded is | s detecte | d. When | "L", ca | ssette ur | nloaded i | s detecte | ed. | | |
| SFG | I | Pins (3) and (3) of IC002 | Indefinite | *1 | *1 | *1 | Indefinite | *1 | Indefinite | * 1 | Indefinite | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 | *1 |
| CC DOWN R | ı | Pin @ of IC002 | "H" wh | hen cass | sette com | partmen | t is open | . "L" \ | when cas | sette co | mpartmer | nt is do | wn. | | | | L | | | | |
| LAMP | 0 | Pin ① of IC003 | "H" wh | hen tape | threadin | g is cor | npleted. F | ulse ou | tput whe | n tape | threading | or tape | unthread | ding. | | | | | | | |

^{*1.} Pulse according to reel rotation.

3-15. SYSTEM CONTROL — AFM AUDIO BLOCK INTERFACE (AU-54 BOARD)

| | | Mode | CTOD | - | 5514 | | REC • | | AF REC | | PB • | | | İ | | | | SLOW | SLOW | | T | FWD | RVS |
|-----------------------|-----|-------------------------------|---------|-----------|-----------|-----------|----------|----------|------------|-----------|-------------|-----------|------------|--------------|-----------|----------|--------|----------------|----------|----------|----------|-------------|-------------|
| Signal name | 1/0 | Pin No. | STOP | FF | REW | REC | PAUSE | AF REC | PAUSE | PB . | PAUSE | × 1 | -×1 | × 2 | -×2 | × 9 | -×9 | (1/5, 1/10) | (-1/5, | CUE | REV | INDEX | INDEX |
| IN SEL A | 0 | Pin ⑤ of IC001 | | | | | - | 1 | | | | | | | | | | 1/10) | -1/10) | | L | SEARCH | SEARCH |
| IN SEL B | 0 | Pin 6 of IC001 | Accordi | ing to in | put selec | tion. (A | ccording | to whe | ther there | e are Tl | JNER/LI | NE/SIM | UL and | micropho | ne input. |) | | | | | | | |
| AF SEL | 0 | Pin ® of ICO01 | 1 | | | | | | | | | | - | | no input. | | | | | - | | | |
| OUT SEL A | 0 | Pin ③ of IC001 | | | | | | | | | | | | | | <u>-</u> | | | | | | | |
| OUT SEL B | 0 | Pin ② of IC001 | Accordi | ing to o | utput sek | ection. (| Accordin | g to the | audio m | nultiplex | mode du | ring rece | iving, the | PCM II | D code | (STEREO | /MONO | /BILING | UAL) re | corded o | on a tap | e during | plaving |
| OUT SEL C | 0 | Pin ① of IC001 | 1 | | | | back and | the so | und mon | itoring s | witch. | | | | | | | | | | | | 1-1-1 |
| SP/LP | _ | | 1 | | | | | | | | | | | | | | | | | | | | |
| SF/ LF | 0 | Pin @ of IC001 | Accordi | ng to sp | eed sele | cting or | a playin | back t | ape. | | | | | | - | | | | <u> </u> | | | | |
| AUDIO MUTE | 0 | Pin ② of IC001 Pin ④ of IC001 | Accordi | ng to sp | eed sele | cting or | a playin | g back t | ape. | Н | L | н | | Н | | | , u | | | 1 | ż | | |
| | | | | | | | | | | Н | L | Н | Н | Н | Н | Н | Н | Н | Н | Н | H | L | L |
| AUDIO MUTE | 0 | Pin 4 of IC001 | | | | | | | H L | Н | L H | Н | H | H | Н | Н | Н | Н | Н | Н | Н | L H | L |
| AUDIO MUTE AF PB/REC | 0 | Pin @ of IC001 Pin @ of IC001 | H L | H L | H L | | H L | | | | L H H | | Н | Н | Н | | | | | | | L H H | L H H |

^{*1.} According to broadcasting system (STEREO/MONO/BILINGUAL) and sound monitoring switch.
*2. According to PCM ID code recorded on a tape and sound monitoring switch.

3-16. PCM INDEX CONTROLLER — PCM AUDIO BLOCK INTERFACE

| | Mode | 0700 | | | | BEC • | | AE DEC | | DP. | | T | | | | | SLOW | SLOW | EWD | RVS |
|-----|------------------|---|---|---|---|--|--|---|--|---|--|---|--|--|---|---|--|--|--|--|
| 1/0 | Pin No. | STOP | FF | REW | REC | PAUSE | AF REC | PAUSE | PB | PAUSE | ×1 | -×1 | × 2 | -×2 | × 9 | -×9 | (1/5, | (-1/5, | INDEX | INDEX |
| ı | Pin 6 of IC500 | L | L | L | Н | L | Н | L | *1.79*** ₁ | | | " | l" when | playing | back P(| M signa | | 1/10/ | | 102711101 |
| 0 | Pin 🗐 of IC500 | L | L | L | L | Н | L | L | L | L | L | L | 1 | 1 | 1 | 1 | 1 | | Γ. | Γ. |
| 0 | Pin ② of IC500 | Н | .H | Н | L | Н | Н | L | Н | Н | Н | Н | Н | н | н | н | | L | - | |
| 0 | Pin ② of IC500 | L | L | L | Н | L | Н | Н | . Н | н | Н | | | | | | | | | H |
| 0 | Pin (3) of IC500 | Н | Н | . Н | Н. | Н | ·H | н | Н | | | | | | | | | | Н . | Н |
| 0 | Pin 🛭 of IC500 | L | L | L | L | L | | 1 | 1 | 1 1 | '.' | | ! 1 | П | п . | . н | Н | Н . | L | Н |
| | 0 0 0 | I ✓ O Pin No. I Pin ௵ of IC500 O Pin 颁 of IC500 O Pin ฬ of IC500 | I / O Pin № of IC500 L O Pin ₭ of IC500 L O Pin ₭ of IC500 L O Pin ₺ of IC500 H O Pin ₺ of IC500 L O Pin ₺ of IC500 H | I / O Pin № STOP FF I Pin ♠ of IC500 L L O Pin ♠ of IC500 L L O Pin ♠ of IC500 H H O Pin ♠ of IC500 L L O Pin ♠ of IC500 H H O Pin ♠ of IC500 H H | I / O Pin № of IC500 L L L I Pin ♠ of IC500 L L L O Pin ♠ of IC500 L L L O Pin ♠ of IC500 H H H O Pin ♠ of IC500 L L L O Pin ♠ of IC500 H H H H H H H | I/O Pin No. I Pin of IC500 L L L L D Pin of IC500 D Pin of IC500 | I/O Pin No. STOP FF REW REC REC PAUSE I Pin ® of IC500 L L L H L O Pin ® of IC500 L L L L H O Pin ® of IC500 H H H H L O Pin Ø of IC500 L L L H H O Pin Ø of IC500 H H H H H | I/O Pin No. STOP FF REW REC REC PAUSE AF REC PAUSE I Pin ® of IC500 L L L H L H O Pin ® of IC500 L L L L H H H O Pin ® of IC500 L L L H | I/O Pin No. STOP FF REW REC REC PAUSE AF REC PAUSE I Pin ® of IC500 L L L H L H L O Pin ® of IC500 L L L L H H L L O Pin ® of IC500 L L L H H H H H O Pin ® of IC500 H H H H H H H H H H | I/O Pin No. STOP FF REW REC REC PAUSE AF REC PAUSE AF REC PAUSE PB PAUSE I Pin ® of IC500 L L L H L H L L L L L L L L L L L L L L L L L H | I/O Pin No. STOP FF REW REC REC PAUSE AF REC PAUSE PB PAUSE I Pin ® of IC500 L L L H L H L H | No. STOP FF REW REC REC AF REC PAUSE PB PAUSE X 1 | No. STOP FF REW REC REC AF REC REC PB PAUSE X 1 -X 1 | STOP FF REW REC REC AF REC REC PB PAUSE X 1 -X 1 X 2 | STOP FF REW REC REC AF REC PB PAUSE X1 -X1 X2 -X2 | STOP FF REW REC REC PAUSE PB PAUSE X1 -X1 X2 -X2 X9 | STOP FF REW REC REC PAUSE AF REC PB PAUSE X 1 -X 1 X 2 -X 2 X 9 -X 9 | STOP FF REW REC REC AF REC PAUSE PB PAUSE X 1 -X 1 X 2 -X 2 X 9 -X 9 X 1 X 1 X 2 -X 2 X 9 -X 9 X 1 X 1 X 2 -X 2 X 9 -X 9 X 1 X 1 X 2 -X 2 X 9 -X 9 X 1 X 1 X 2 -X 2 X 9 -X 9 X 1 X 1 X 2 -X 2 X 9 -X 9 X 1 X 1 X 2 -X 2 X 9 -X 9 X 1 X 1 X 1 X 2 -X 2 X 9 -X 9 X 1 | STOP FF REW REC REC AF REC PAUSE PB PAUSE X 1 -X 1 X 2 -X 2 X 9 -X 9 X 5LOW (1/5, 1/10) (- | STOP FF REW REC REC AF REC PB PB PAUSE X 1 -X 1 X 2 -X 2 X 9 -X 9 X 5LOW SLOW INDEX SEARCH |

LP

3-17. SYSTEM CONTROL — PCM AUDIO BLOCK INTERFACE

| Signal name | I/O | Pin No. | Input/Output level |
|-------------|-----|-----------------|---|
| CAP ON | 0 | Pin 4 of IC001 | "L" when capstan is rotating. |
| FE ON | 0 | Pin 29 of IC001 | "L" when recording (including multi PCM REC) and AUDIO DUB. |

3-18. SERVO — VIDEO BLOCK INTERFACE

| Signal name | I/O | Pin No. | "H" when recording or playing back in SP mode. "L" when recording or playing back in LP mode. Pulse or "H" when playing back at variable speeds. Pulse for LP mode and "H" for SP mode when multi PCM playing back. "L" for LP mode and "H" for SP mode when multi PCM playing back. | |
|--------------|-----|-------------------|---|--|
| SP CH SHORT | 0 | Pin 🚯 of IC205 | | |
| LP CH SHORT | 0 | Pin @ of IC205 | "L" when recording or playing back in SP mode. "H" when recording or playing back in LP mode. Pulse or "H" when playing back at variable speeds. "H" for LP mode and pulse for SP mode when multi PCM playing back. "H" for LP mode and "L" for SP mode when multi PCM recording. | |
| COMP SYNC | I | Pin 45 of IC205 | Positive polarity composite sync signal. | |
| VI SWP | 0 | Pin 46 of IC205 | 50% duty pulse of 2V cycle. | |
| HCHR | 0 | Pin ① of IC205 | "L" when stop. "H" when normal playback. Pulse when playing back at variable speeds. | |
| YD EX | 0 | Pin 48 of IC205 | Normally "L". "H" pulse when playing back at variable speeds in SP mode. | |
| HH DL | 0 | Pin 🕲 of IC205 | Normally "H". Pulse when playing back at variable speeds in SP mode. | |
| LP VIDEO REC | 0 | Pin 59 of IC205 | Normally "L". "H" when recording in LP mode. | |
| LP PCM REC | 0 | Pin 60 of IC205 | Normally "L". "H" pulse of V cycle when recording in LP mode (including AUDIO DUB, INDEX writing and multi PCM REC). | |
| SP VIDEO REC | 0 | Pin 60 of IC205 | Normally "L". "H" when recording in SP mode. | |
| SP PCM REC | I | Pin ② of IC205 | Normally "L". "H" pulse of V cycle when recording in SP mode (including AUDIO DUB, INDEX writing and multi PCM REC). | |
| RP SWP | I | Pin 🚳 of IC205 | 50% duty pulse of 2V cycle. | |
| H CHG | 0 | Pin 🚱 of IC205 | "H" when recording or playing back in SP mode. "L" when recording or playing back in LP mode. Pulse when playing back at variable speeds. | |
| REF V | I | Pin (19) of IC210 | "L" pulse of V cycle. | |

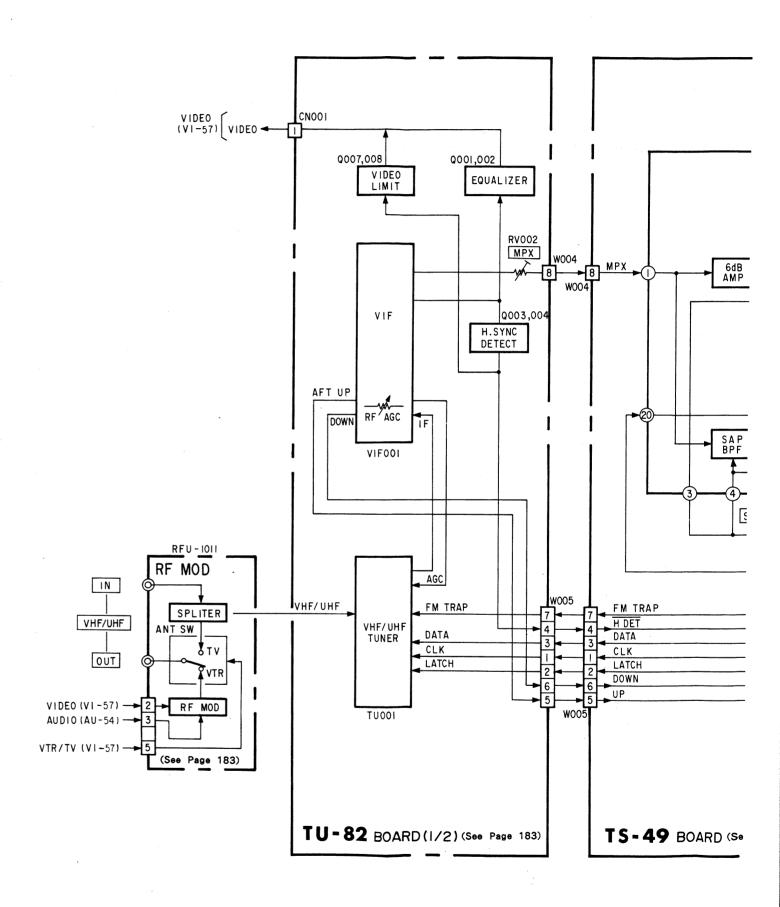
3-19. PCM AUDIO — VIDEO BLOCK INTERFACE

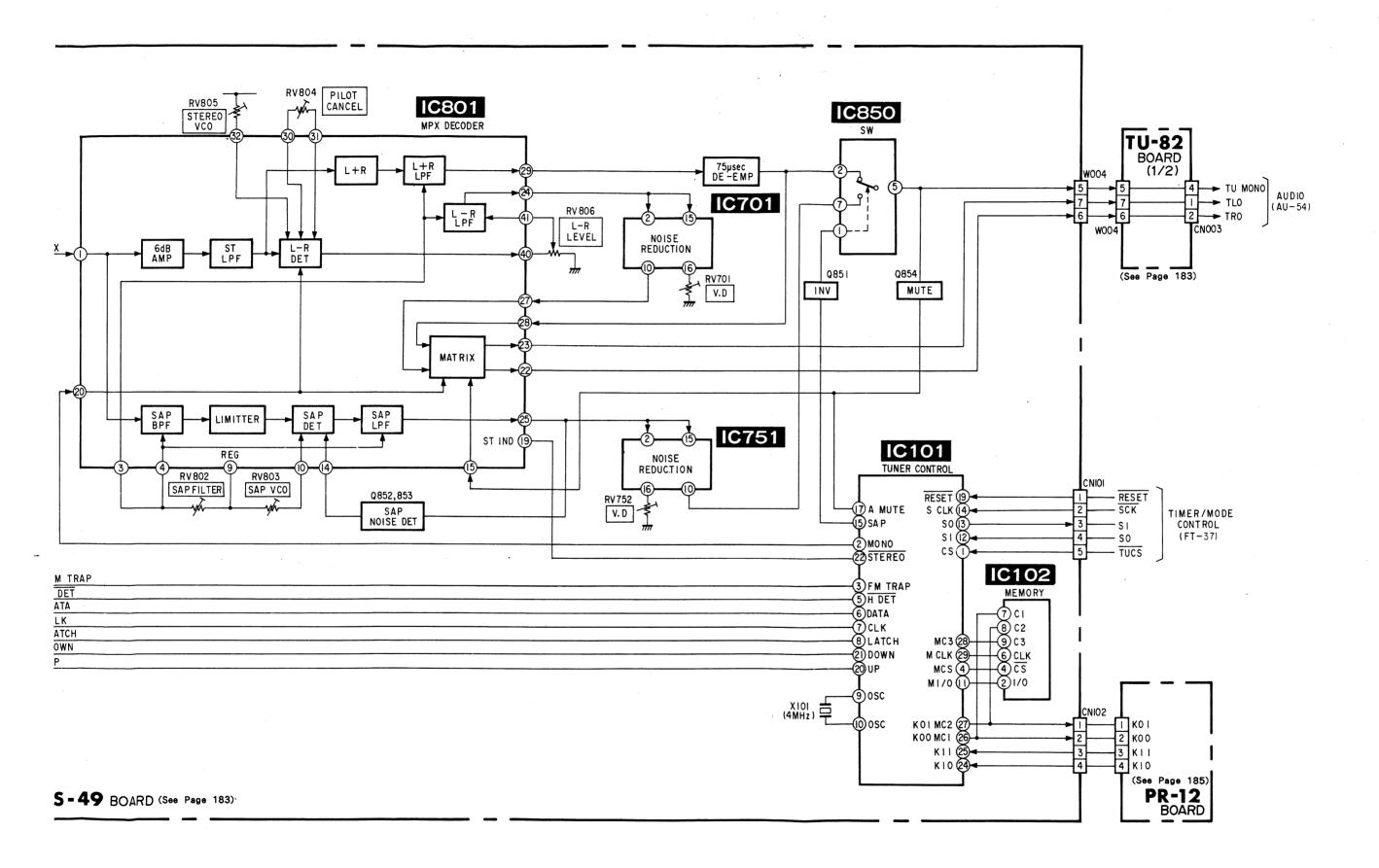
| Signal name | I/O | Pin No. | Input/Output level | |
|--------------|-----|-------------------|--|--|
| M FE ON | 0 | Pin ① of IC500 | Normally "H". "L" when recording. "L" pulse of 2V cycle when AUDIO DUB. "L" pulse of V cycle when multi PCM recording. | |
| RP AFTER REC | 0 | Pin 60 of IC500 | Normally "L". "H" when AUDIO DUB or INDEX writing. | |
| RAMP | 0 | Pin ② of IC601 | Normally "L". "H" when recording. "H" pulse of V cycle when AUDIO DUB or INDEX writing. | |
| C MUTE | 0 | Pin ① of IC606 | Normally "L". "H" pulse of V cycle when AUDIO DUB or INDEX writing. | |
| HD INSERT | 0 | Pin (14) of IC606 | Normally "L". "H" pulse of H cycle in the writing period when AUDIO DUB or INDEX writing. | |
| AF REC AREA | 0 | Pin (5) of IC606 | Normally "L". "H" pulse of V cycle when AUDIO DUB or INDEX writing. | |

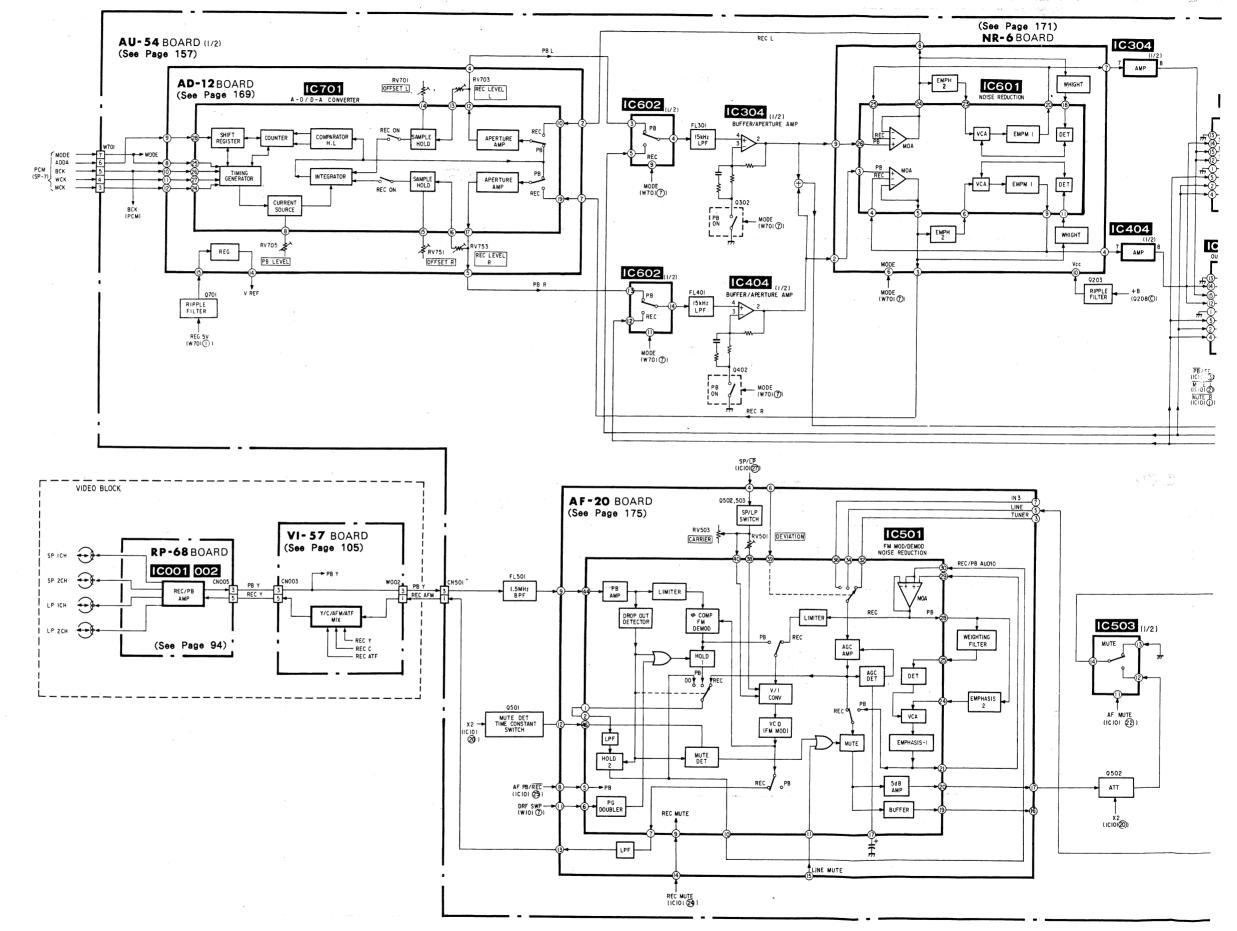
3-20. PCM AUDIO — SERVO BLOCK INTERFACE

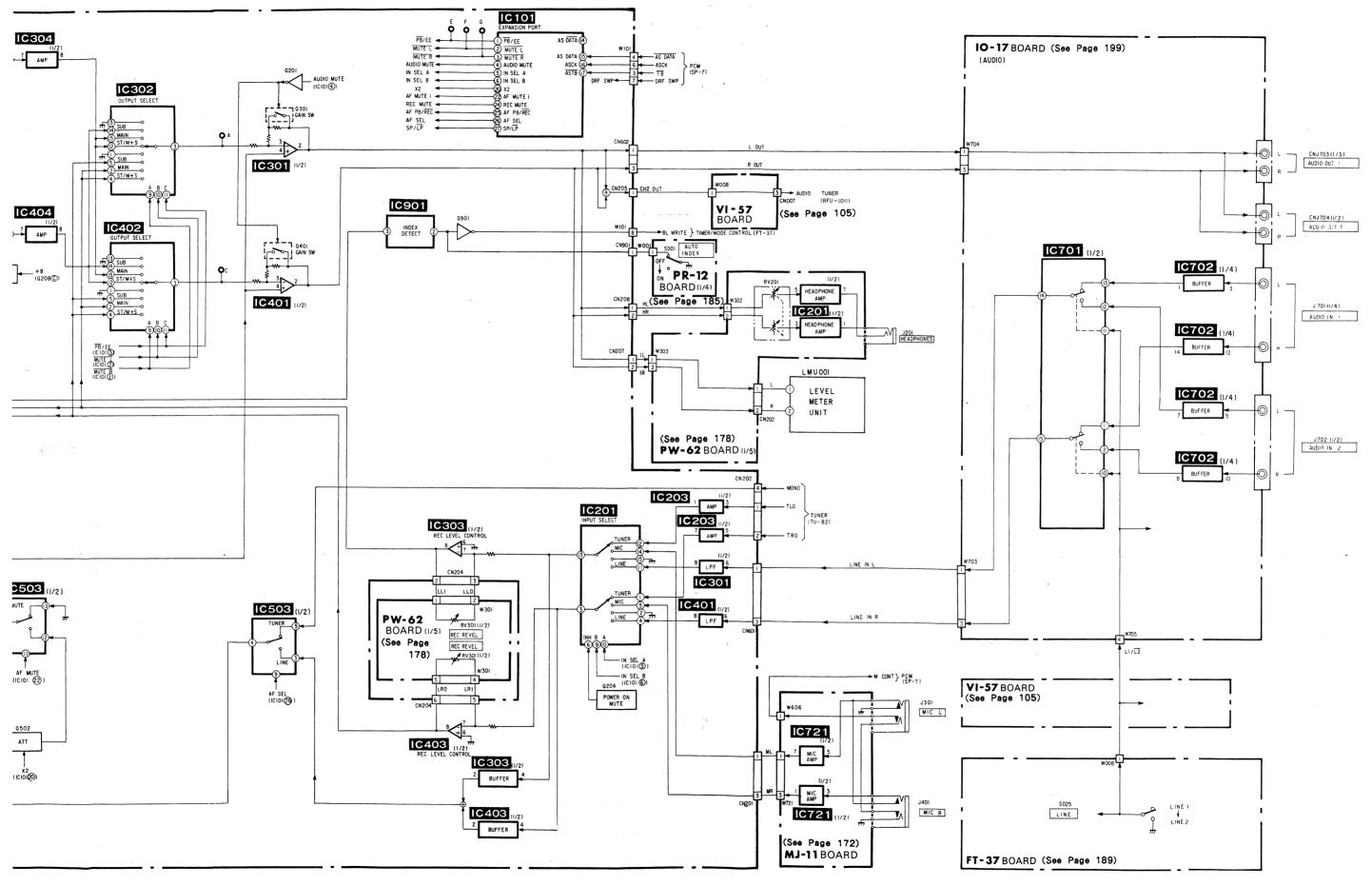
| Signal name | I/O | Pin No. | Input/Output level | | |
|-------------|-----|-------------------------|--|--|--|
| M RF SWP | 0 | Pin ② of IC500 | 50% duty pulse of 2V cycle. | | |
| RF CONT | I | Pins 29 and 30 of IC500 | 50% duty pulse of 2V cycle. | | |
| R AREA | 0 | Pin ① of IC601 | Normally "L". "H" pulse of V cycle when recording (including AUDIO DUB, INDEX writing and multi PCM REC). | | |
| D RF SWP | 0 | Pin 10 of IC601 | 50% duty pulse of 2V cycle. | | |
| AREA | 0 | Pin ⑦ of IC604 | "H" pulse of V cycle. | | |
| MS REF | I | Pin (4) of IC604 | "H" pulse of V cycle. | | |
| ID RF SWP | | Pin (5) of IC604 | 5007 1 | | |
| | I | Pin (4) of IC601 | 50% duty pulse of 2V cycle. | | |
| CH A | 0 | Pin ⑦ of IC500 | Signal indicating a track No. of multi PCM. | | |
| СН В | 0 | Pin (6) of IC500 | CH ALSB, CH CMSB | | |
| CH C | 0 | Pin (15) of IC500 | "H" for these three signals in mode except multi PCM mode. | | |
| HEAD SHORT | 0 | Pin ⑥ of IC500 | Normally "H". "H" pulse of V cycle when multi PCM playing back. | | |
| WRITE | 0 | Pin 29 of IC500 | "H" when INDEX writing. | | |
| ERASE | 0 | Pin ② of IC500 | "H" when INDEX deleting. | | |

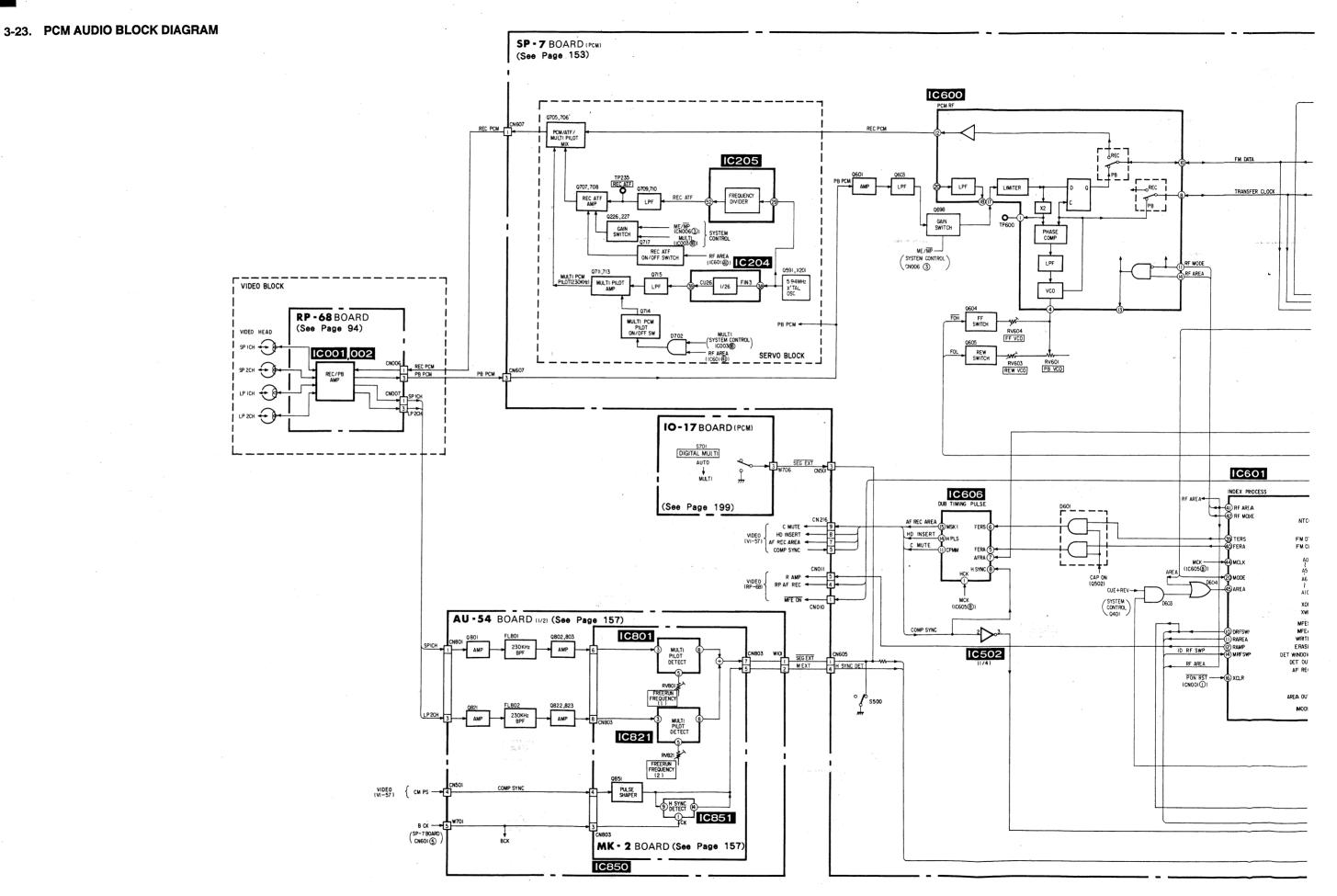
3-21. TUNER BLOCK DIAGRAM

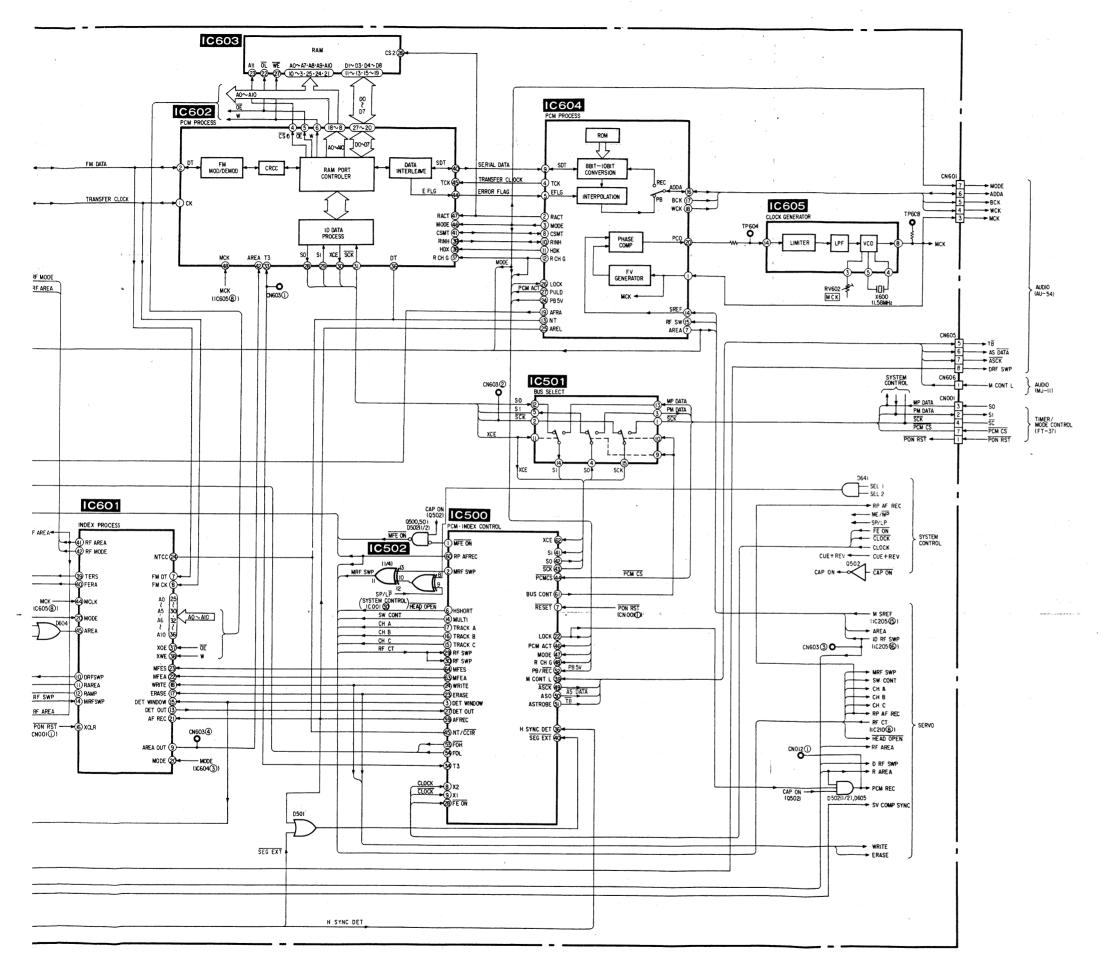


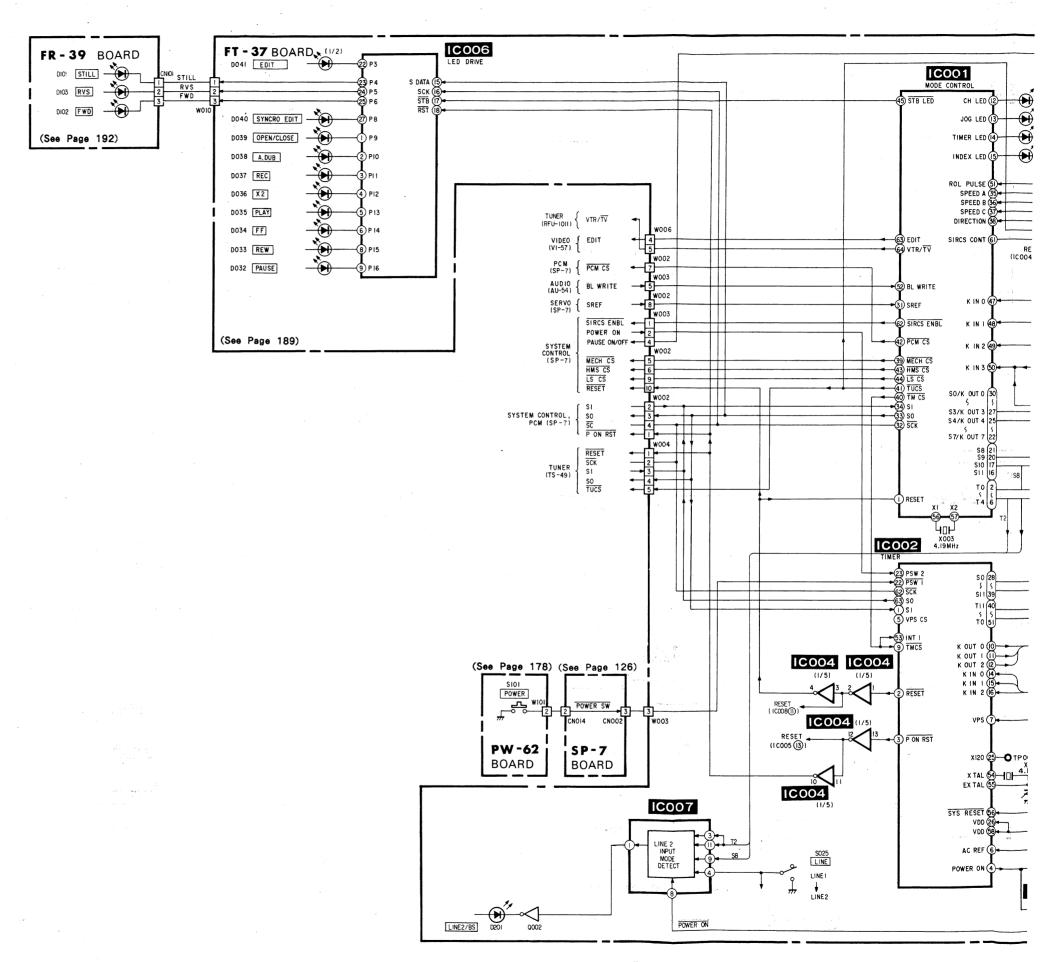


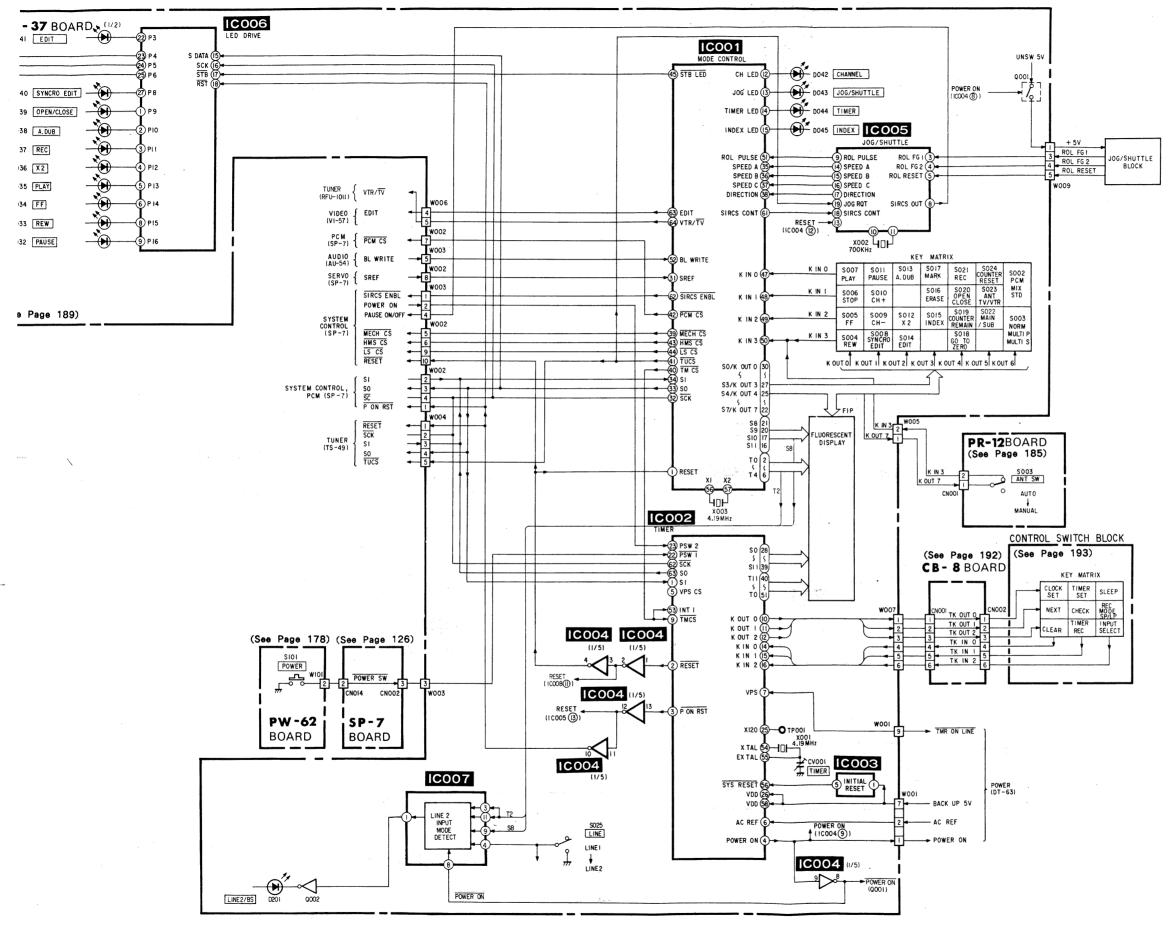


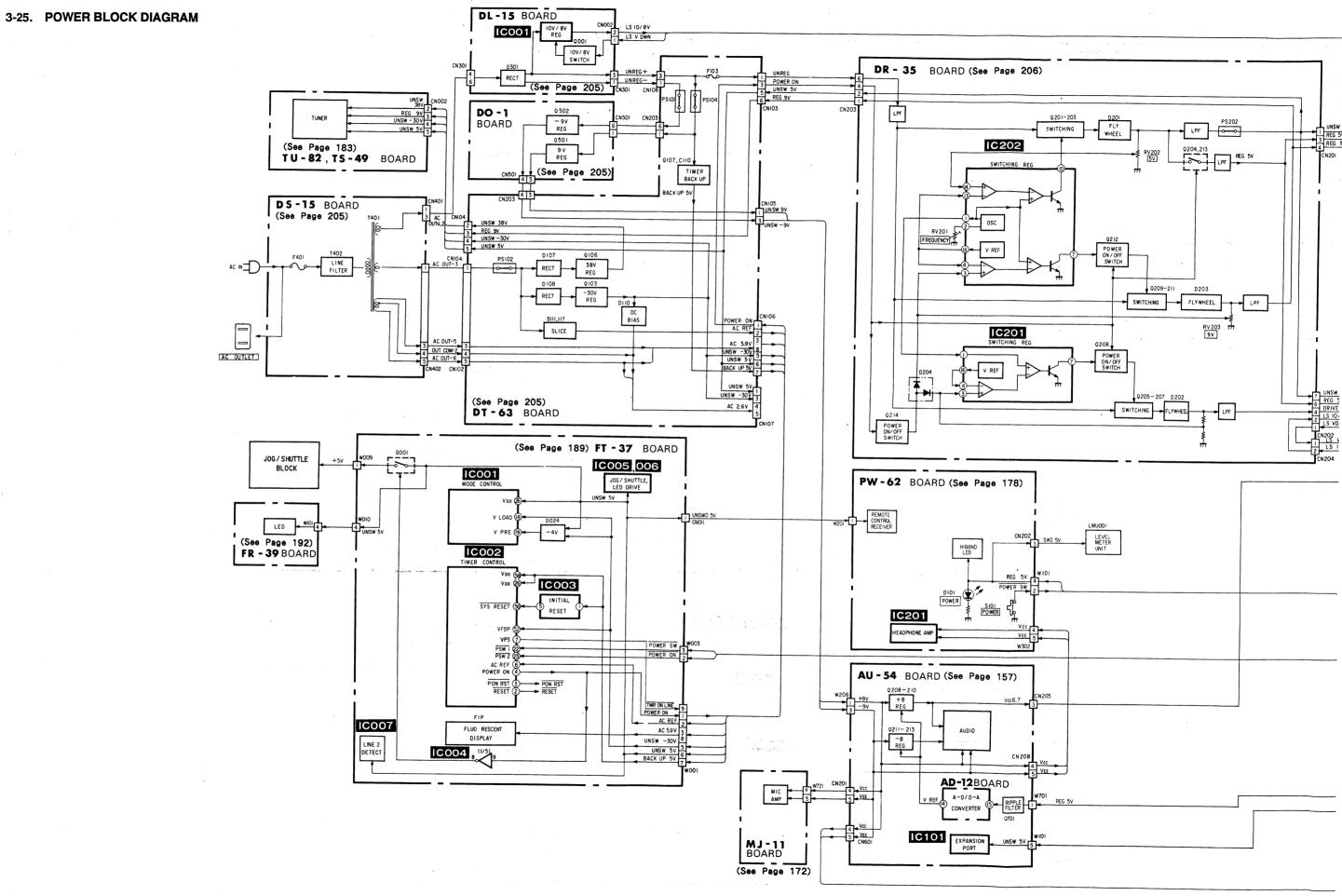


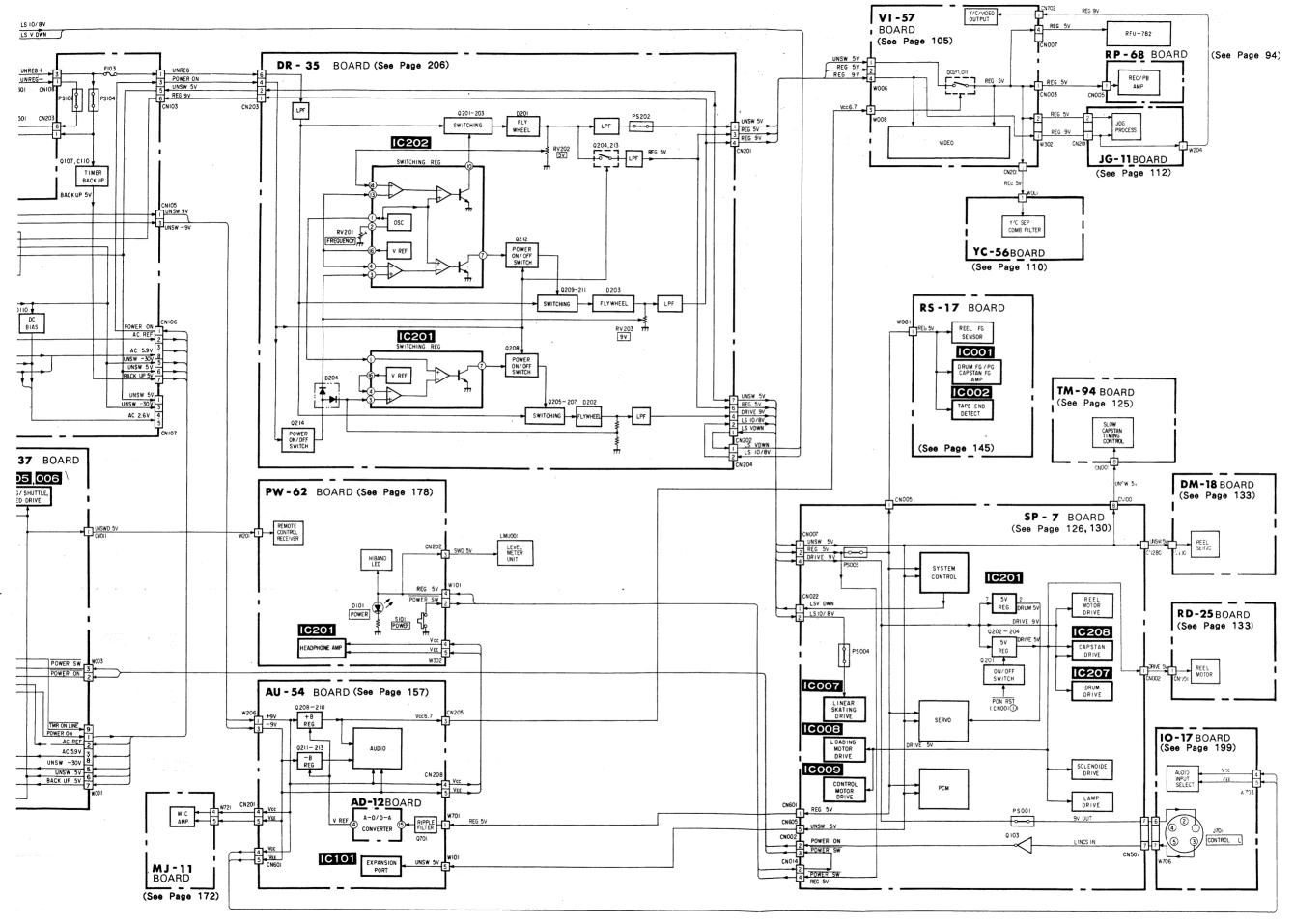












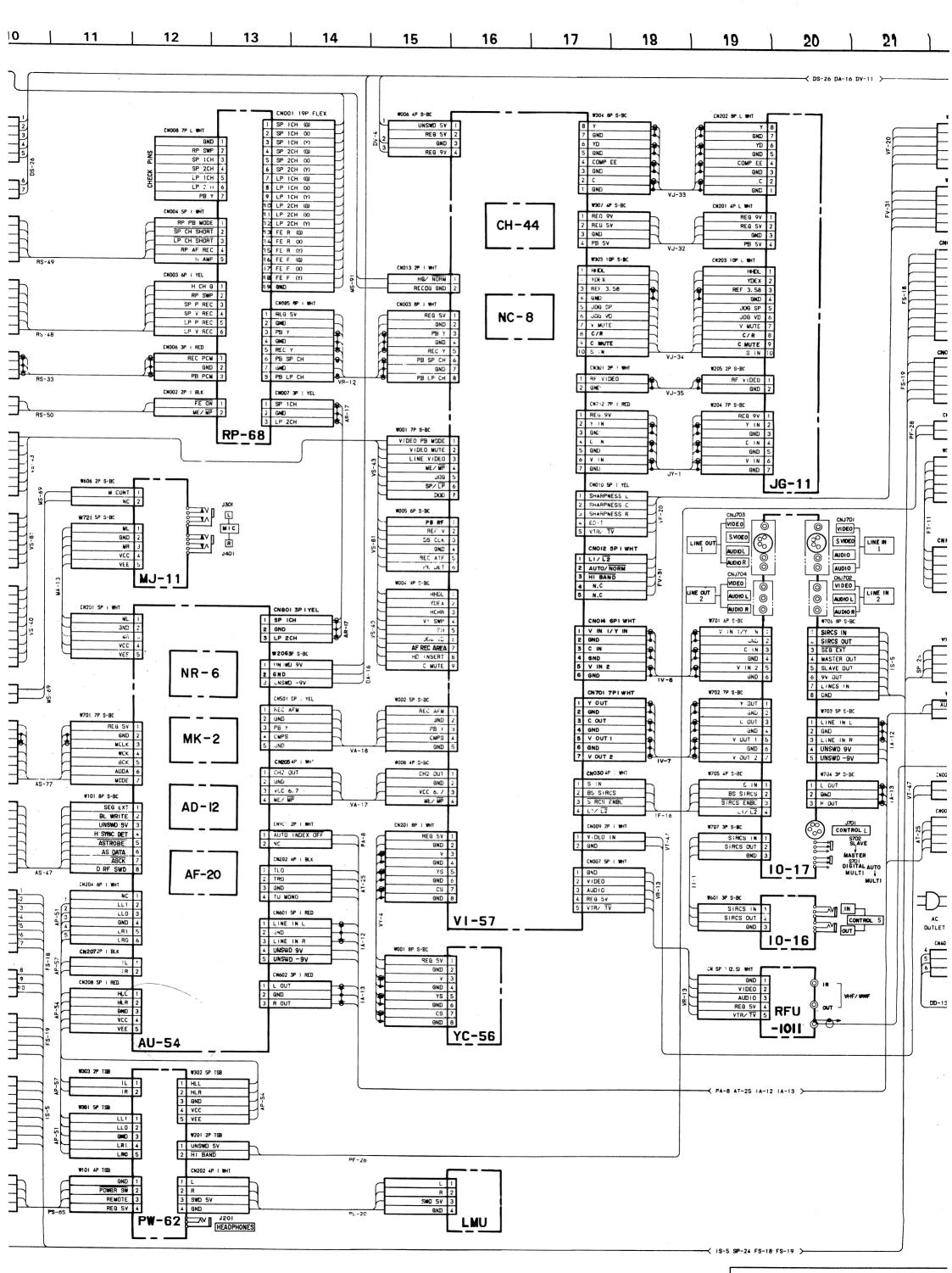
SECTION 4 PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS 9 8 7 10 11 5 3 4 4-1. FRAME SCHEMATIC DIAGRAM Α DM-18 CN017 2P | YEL UNSWD 5V SP 1CH (G) 1 <u>M</u> 1 OPEN SP 1:CH (X) REG 5V SP 1GH (Y) REG GND CN1 R MOTOR CN200 6P | WHT DRIVE 9V SP 2CH (8) DRIVE 5V DRIVE GND В SP 2CH (Y) GND -3G WOEO HE AD SPYLP CN022 2P | WHT REEL FWD LP ICH (G **(M)** REEL FWD REEL RVS LSVDWN LP 1CH (x) REEL RVS LP ICH (Y) LS10/8V SW FG 6 LP 2CH (G) SW FG CNOTE SP F YER 2P L MOTOR CNO19 2P I RED 1 RP PB MODE 2 SP CH SHORT LP 2CH (Y) LOAD LOAD **M** FER (G) UNLOAD UNLOAD MS-36 LP CH SHORT C 2P RECOR SW CN004 2P | BLK FE R (Y: 115 4 RP AF REC FE F (G) 16 ERASE HEAD REG GND 5 R AMP REG GNE RS-49 T10/ T13 FE F (X) T10/ T13 CN215 6P | YEL FE F (Y) CH006 3P | YEL 3P RECOR SW F 1 H CH G REG GND REG GND 001 REC + ROOF REC PROOF SP P REC ME/ MP SP V REC CW018 3P | WHT 3P PLUNGER RECOG GND LP P REC D DRIVE SV DRIVE 5V LP V REC CN607 3P | RED HOLD HOLD 1. REC PCM 4P DRUM DRIVE CM213 4P + BLK GND DMV DMV PB PCM M902 DRUM MOTOR DMC CN010 2P | BLK DMW DMW FE ON 6P L SW RED 2 ME/MP RS-50 CW021 5P ! RED GND GND VIDEO PB MODE VIDEO MUTE LINE VIDEO LS-9 ME/ MP CHASSIS GND CHASSIS UND 6P M SW WHT CN020 6P | RED SP/ LP M903 CONTROL MOTOR CONT ML M CUNT DOD CONT MR CONT MR W721 5P S-BC 1 PB Y MA MS-4 GND DS CLK GND 11P CAP DRIVE CN212 11P 1 WHT GND REC ATE vcc G MR VCC CMV CMV VEE CAPSTAN CFG A LMW DRIVE GND DRIVE GND CN2 . 6 . 9P | BLK VHE (+) CFG B VHE (+) 1 HHDL (M)VHE (--) VHE (-) ADE X UHE (+) UHE (+) DFG UHE (-) UHE (-) 9 WHE (+) FH GNE WHE (+) DFP COM WHE (-) AHE (-) AF REC AREA MECHANISM BLOCK VCC VEF 11 HE VCC REG GND HE VCC 8 HD INSERT 9 C MUTE CN606 2P 1 WHT I M CONT L DFG 1 I REG 5V REG 5V 1 DPG. SFG CN601 7P : WHT DFP COM REG GND REG GND REG 5V REG GND TFG 2 IFG 2 I REG 5V TFG 1 TFG 1 CFG 1 MCLK MCLK CN217 3P ! WHT MR VCC DPG 1 WC K WCK CFG DFG 1 BCK BCK DPG ' TOP MR GND ADDA ADDA 7 MODE 10 END CFG B MCDE AS-77 CN008 2P | RED CN004 29 L BLK W101 8P S-BC CN605 8P + WHT END REG GND 1 1 TP LD 1 SEG EXT SEG EXT 2 REG GNL BL WRITE GN012 7P CHECK-POINT WH 3 UNSWD 5V UNSWD:5V PCM REC CN006 2P | RED ASTROBE H SYNC DET SEL 1 REG GND END 5 ASTROBE AS DATA C AS DATA ATF LOCK RS-17 P SEL 1 DRF SWD & A D RE SWD CHOO! 7P | BLK CN603 SP CHECK-POINT WH 1 PON RST 1 TP LD 2 REG GND X SCK GND IDRF SWP LD-1 5 MECH CS PCM AREA LR1 GND LRO POM CS CN2072P | BLK CN016 2P | BLK WIG2 2P MT REG GND 1 1 C DOWN L 2 LS TOP 0N013 3P 1 BLK 1 SREF 2 LSCS 3 MESET LS TOP 2 TS-78 CN208 SP | RED SOOI MECHA DECK CASSETTE DOWN HLL CNOO2 SP i WHT GND C10015 3P 1 BLK 1 SIRCS ENBL LAMP (+) 1 LAMP (-) 2 2 POWER ON 3 POWER SW LAMP (+) VEE S LAMP (-) M C DOWN R C DOWN R 3 PAUSE ON/OFF PL001(L) 5 BL WRITE TE-5 PL002 (R·) FH MSK 1 1 SIRCS IN 2 SIRCS DUT 3 SEG EXT 0N001 9P L WHT CAP ON OUT 1 FH MSK CAP ON IN PAUSE MASTER OU 2 CAP ON OUT
3: CAP ON IN
4 PAUSE CAP F/R OUT SLAVE OUT LL1 N CAP FAR IN 6 9V OUT LLO LINCS IN 5 CAP F / R OUT REEL DIR 6 CAPF/RIN UNSWD 5V 8 GND LRI LRO 7 REEL DIR 8 UNSAD 5V CHOO3 4P I BLK 1 GND TRACON (+) TM-94 2 POWER SW POWER SW TRACON (-) BND 3 REMOTE REMOTE 0 4 REB 5V VTR 1/2 4 SP-7

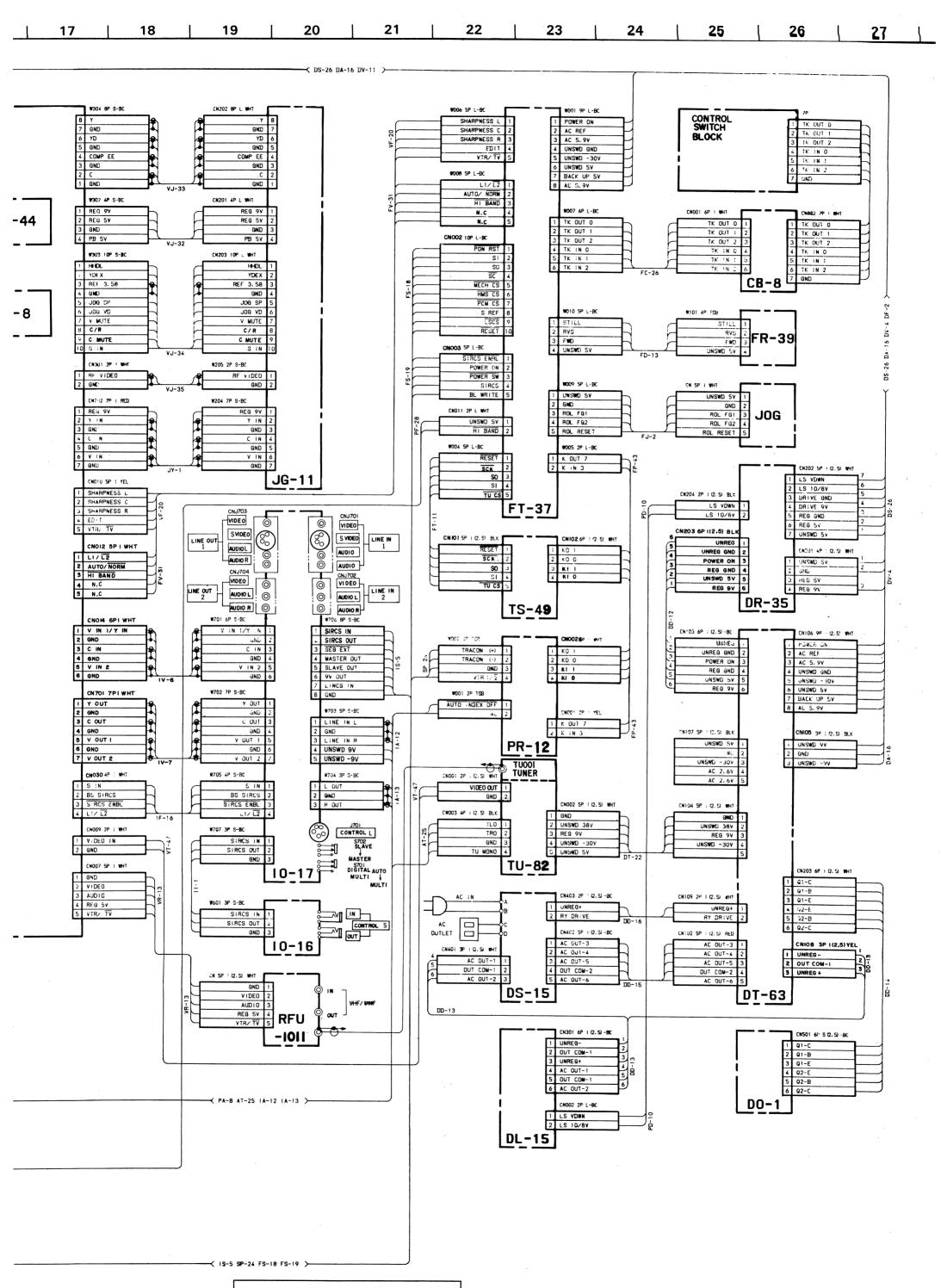
FRAME

— 89 —

FRAME

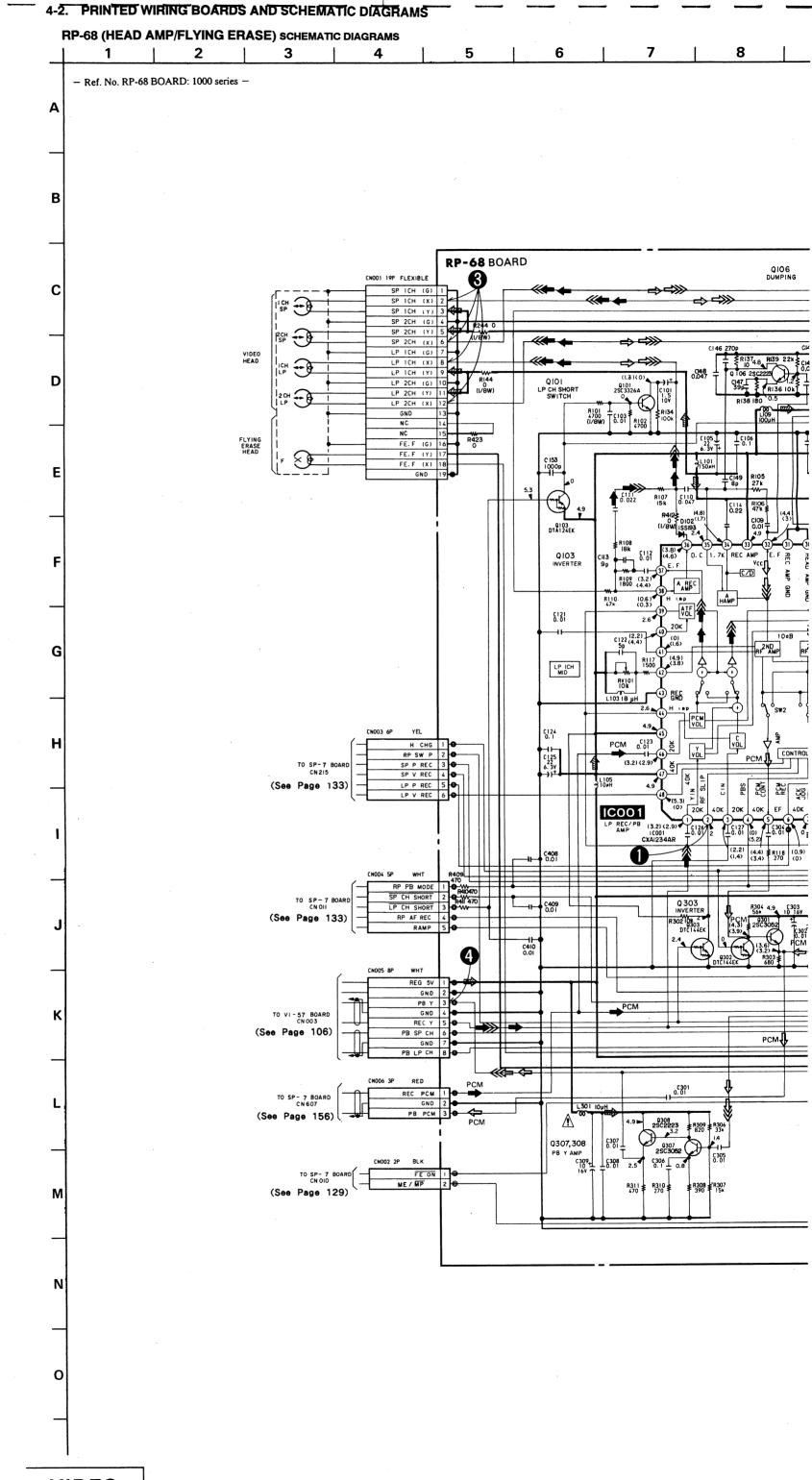
-90 -

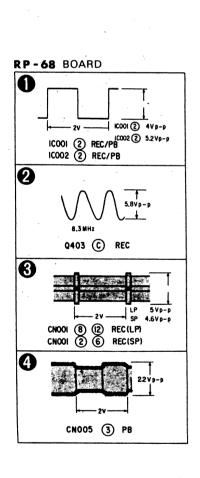


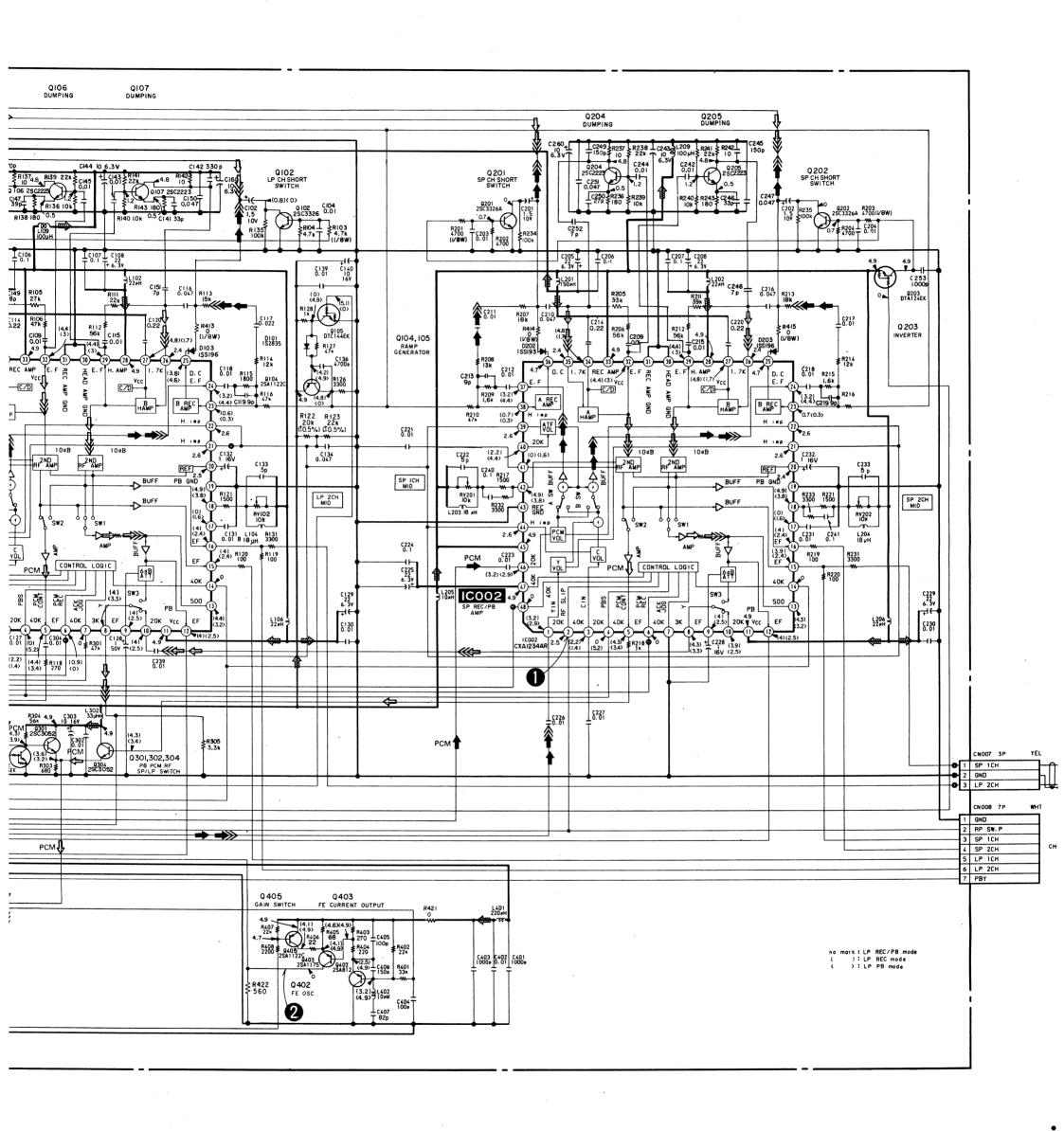


FRAME FRAME

1 —





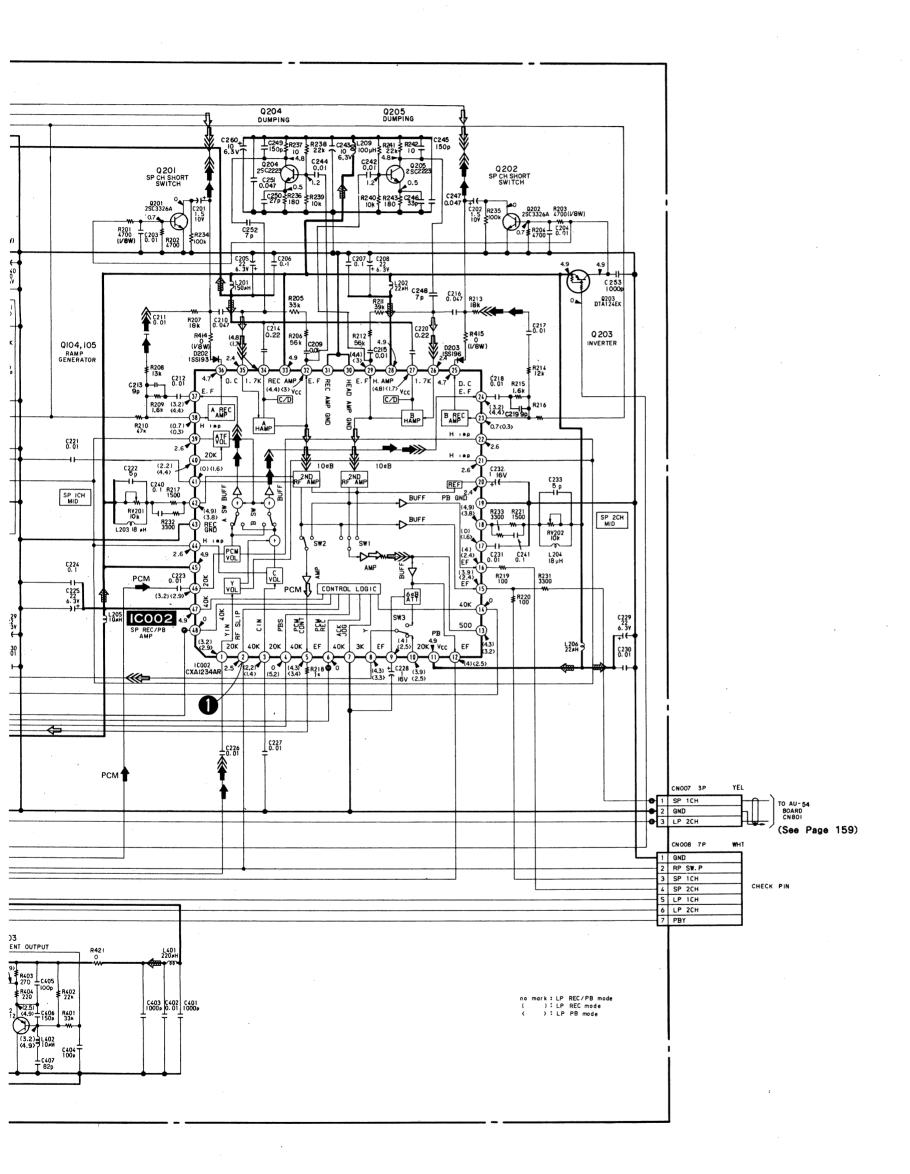


VIDEO VIDEO

— 95 —

.

1 9P



Signal path

| | V | AUDIO Signal | | | |
|-----|--------|--------------|----------|--------------|--|
| | CHROMA | Υ | Y/CHROMA | AUDIO Signal | |
| REC | | | →>>> | - | |
| РВ | | | ➾ | ⇒ | |

12

13

14

15

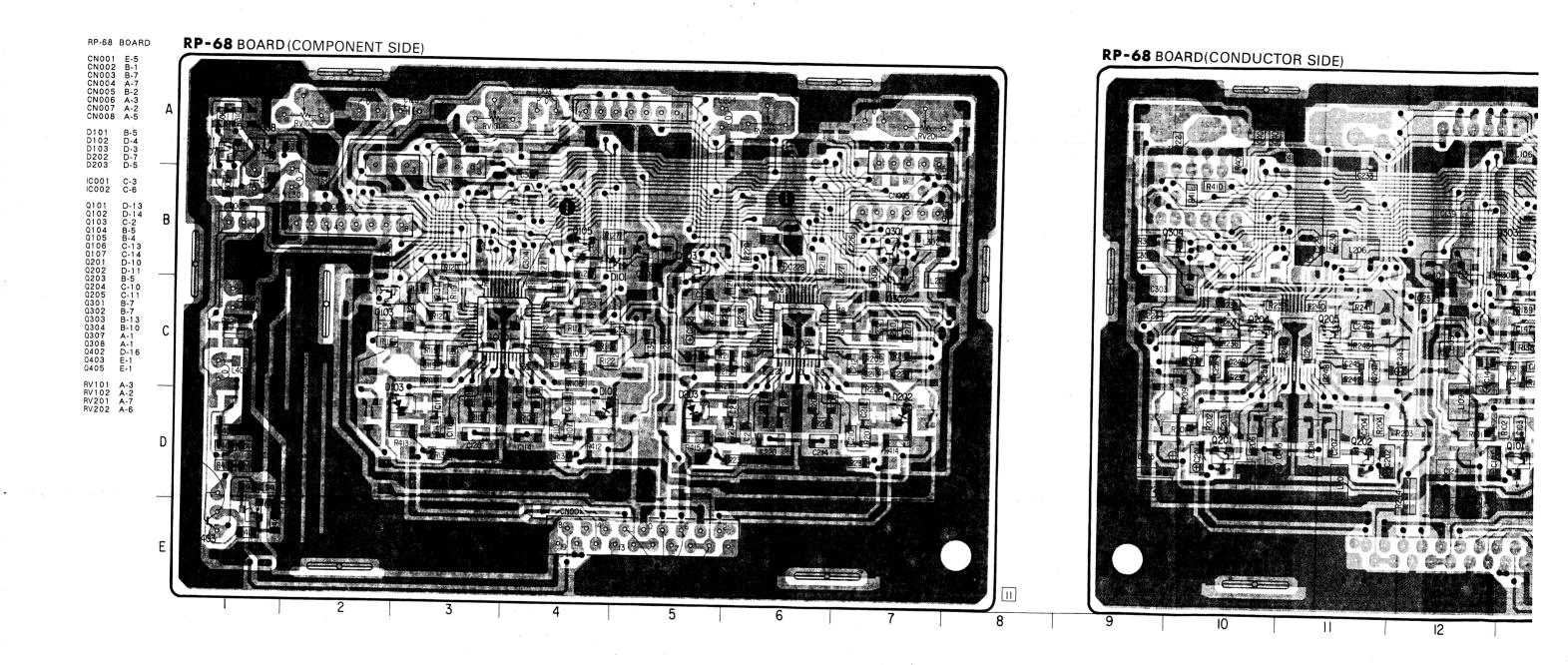
16

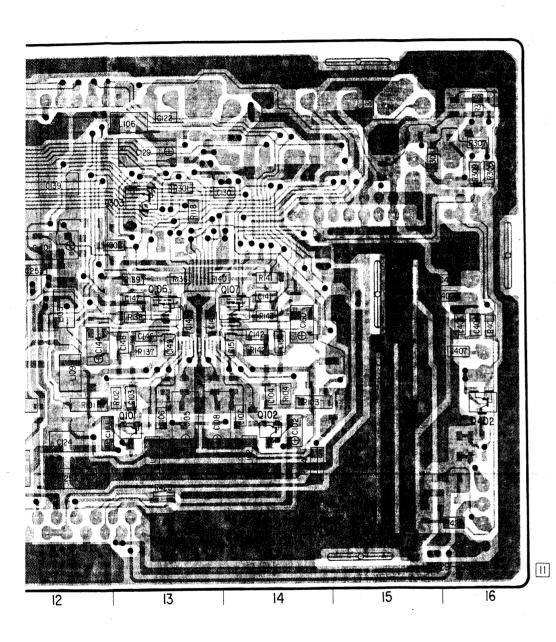
17

18

19

- Ref. No. RP-68 BOARD: 1000 series -





THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.

(In addition to this, the necessary note is printed in each block.)

· For printed wiring boards.

• O— : indicated a lead wire mounted on the component side.

• • : indicated a lead wire mounted on the conductor side.

• 🛇 : Through hole.

• Pattern from the side which enables seeing.

• Eattern of the rear side.

· Circled numbers refer to waveforms.

Caution:

Pattern face side:

Parts on the pattern face side seen from

(Conductor Side) the pattern face are indicated.

Parts face side:

Parts on the parts face side seen from the

(Component side) parts face are indicated.

· For schematic diagrams.

· Caution when replacing chip parts.

New parts must be attached after removal of chip.

Be careful not to heat the minuts side of tantalum capacitor, because it is damaged by the heat.

All resistors are in ohms, 1/4W unless otherwise noted.
 Chip resistor are 1/10W unless otherwise noted.

 $k\Omega$: 1000 Ω , $M\Omega$: 1000 $k\Omega$.

All capacitors are in μF unless otherwise noted. pF: μμF.
 50V or less are not indicated except for electrolytics and tantalums.

 All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

• w : nonflammable resistor.

: fusible resistor.

: panel designation.

• _____ : adjustment for repeair.

• --- : B+ Line.

• === : B- Line.

• IN/OUT direction of (+, -) B LINE.

Circled numbers refer to waveforms.

Voltages are dc between ground and measurement points.

Readings are taken with a color-bar signal input.

Readings are taken with a digital multimeter (DC10MΩ).

• Voltages are taken with a VOM (Input impedance $10M\Omega$).

 Voltage variations may be noted due to normal production tolerances.

Note:

Les composants identifiés par

Note:

The components identified by mark \triangle or dotted line with mark \triangle are critical for safty. Replace only with part

lotted une marque extstyle extsty

rotitical for safty.

Replace only with part number specified.

Ne les remplacer que par une piéce portant le numéro spécifié.

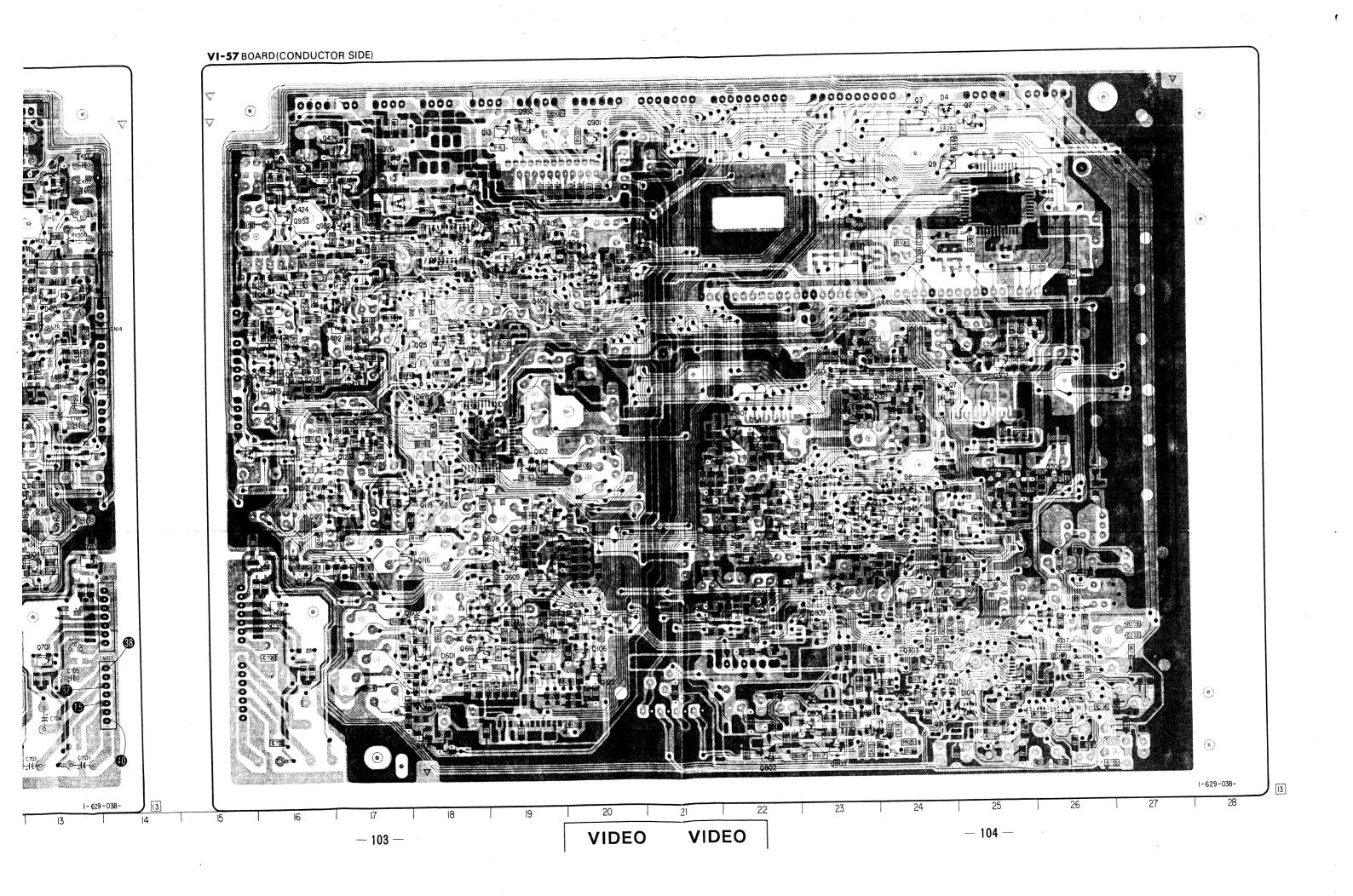
When indicating parts by reference number, please include the board name.

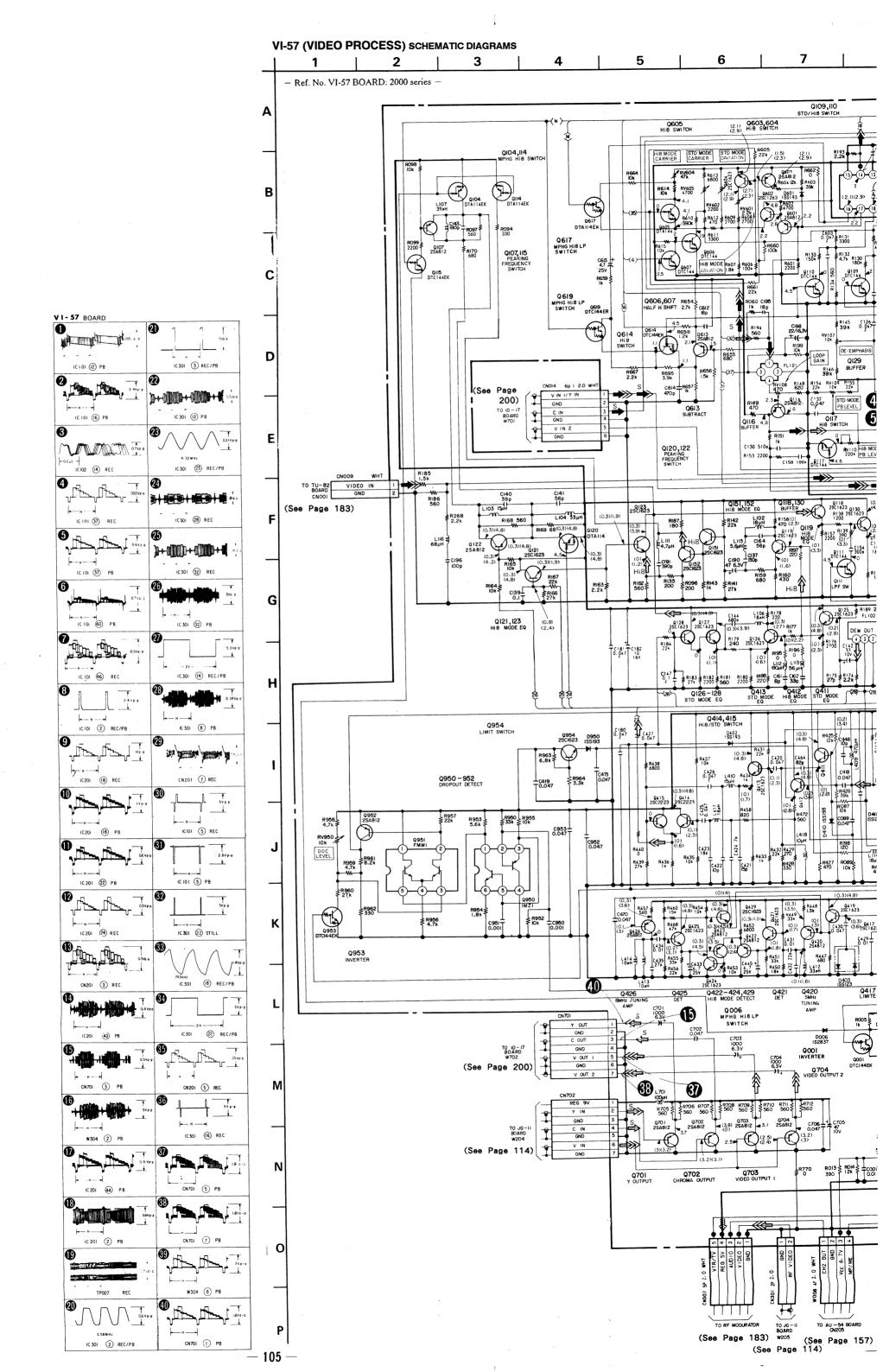
EV-S900

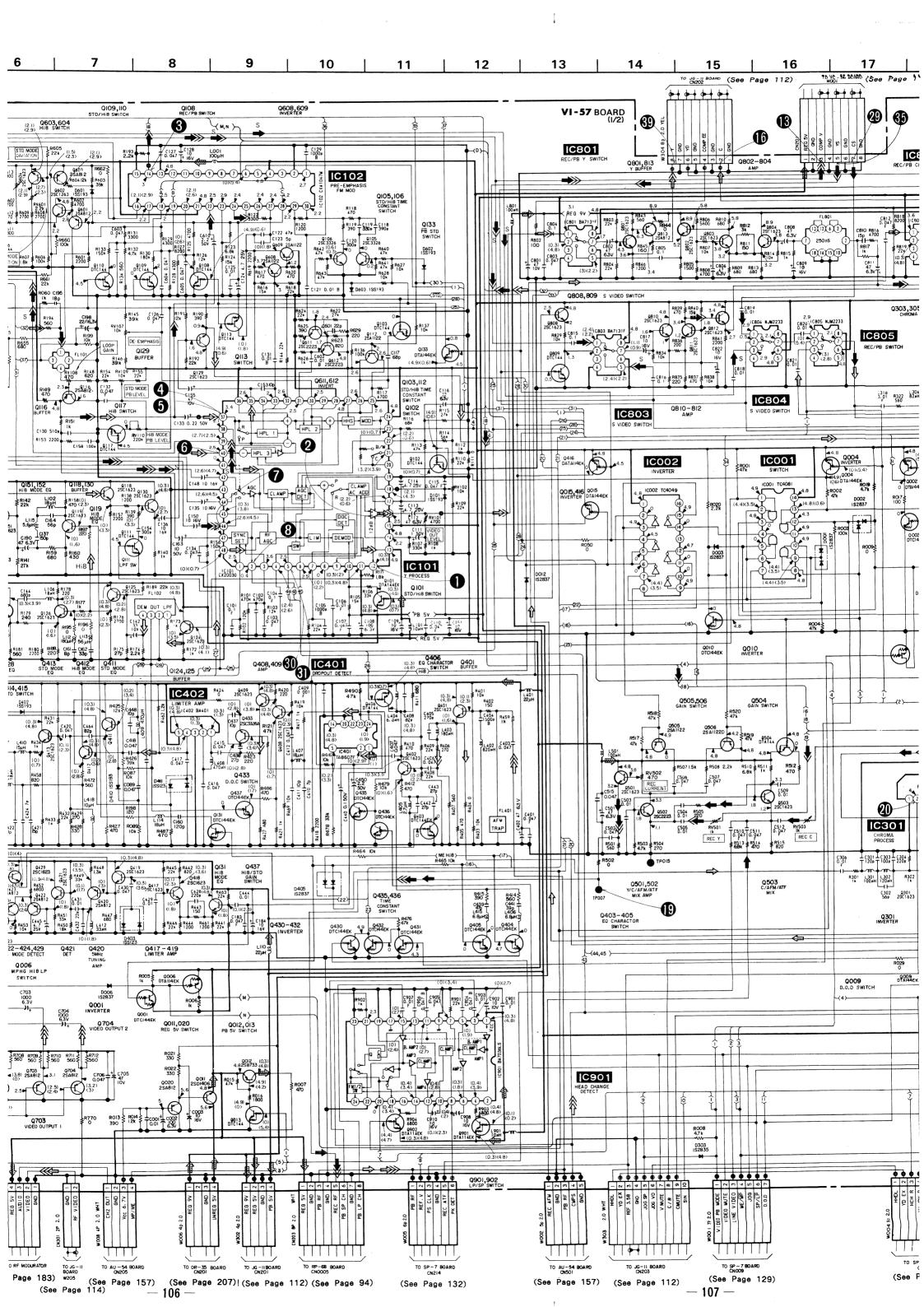
VI-57 (VIDEO PROCESS) PRINTED WIRING BOARDS

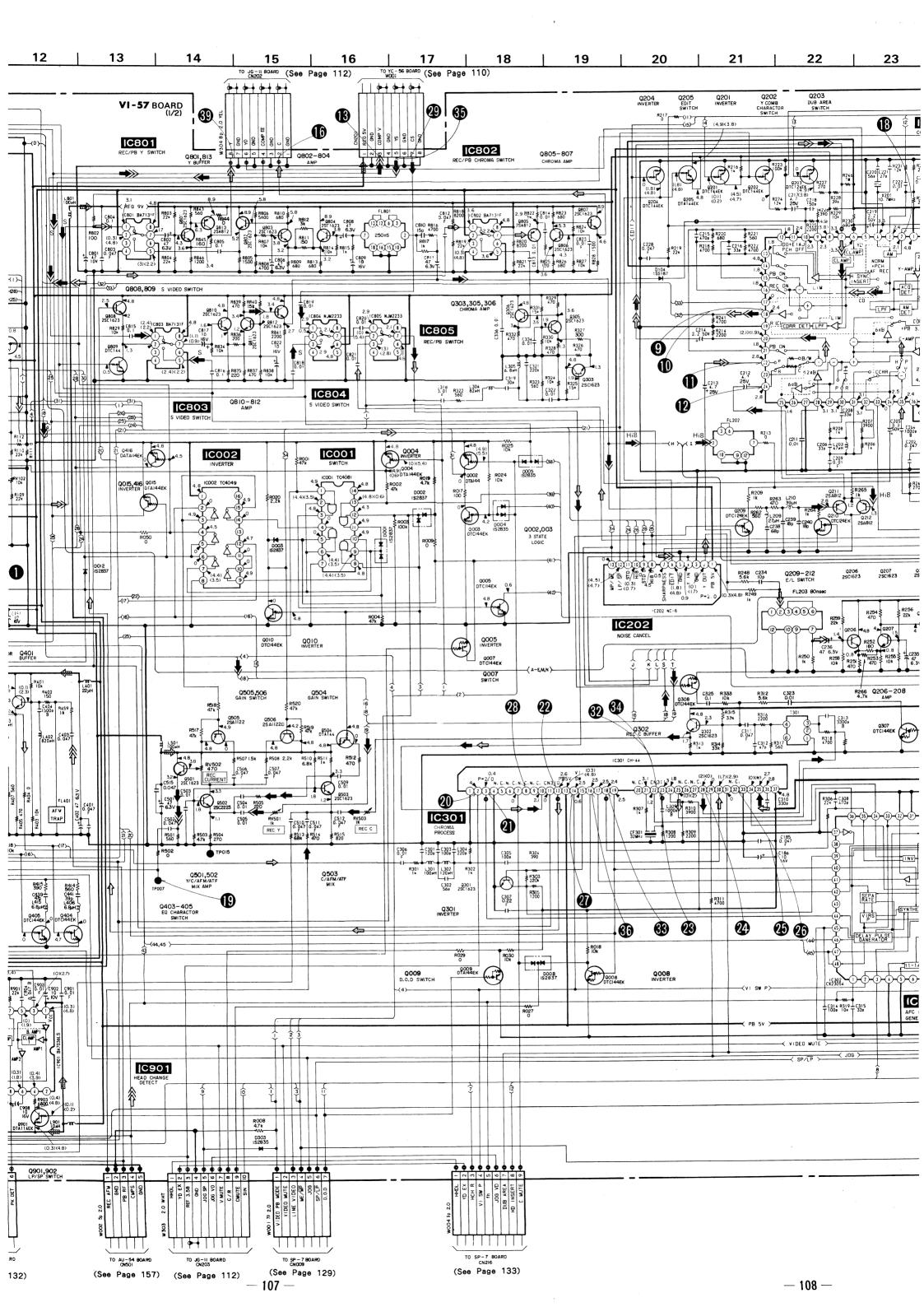
- Ref. No. VI-57 BOARD: 2000 series -VI-57 BOARD (COMPONENT SIDE) CN003 B-8 CN007 A-13 CN009 C-14 CN010 A-3 CN012 A-4 CN013 D-6 CN014 D-14 CN030 E-14 CN201 H-7 CN301 A-12 CN310 C-6 CN311 C-4 CN701 H-14 CN702 G-14 Q809 Q810 Q811 Q812 Q813 Q901 Q902 Q950 Q951 Q952 Q953 Q954 151512 Q1203 Q2203 Q2203 Q2203 Q2203 Q2203 Q2203 Q2203 Q2203 Q22113 Q2 H-23 G-23 G-24 H-21 A-20 A-19 C-10 C-17 C-16 D-16 RV101 E-10 RV102 F-9 RV107 F-10 RV108 G-12 RV109 F-11 RV110 G-11 RV201 H-2 RV202 I-2 RV501 E-6 RV502 E-5 RV503 D-5 RV601 H-12 RV604 I-12 RV950 C-13 D001 D002 D003 D004 D005 D006 D012 D104 D303 D402 D410 D412 D601 D602 D603 D950 TP001 F-12 TP007 D-6 TP015 D-7 IC001 IC002 IC101 IC102 IC202 IC302 IC402 IC801 IC402 IC803 IC803 IC805 IC901 G-5 F-10 I-10 H-3 E-4 C-113 H-7 I-5 H-6 H-5 B-10 LV201 Q0012 Q0003 Q0004 Q0005 Q0007 Q0013 Q0013 Q0013 Q0101 Q0113 Q0111 Q01111 Q01111 Q01111 Q01111 Q01111 Q01111 Q01112 Q0112 Q0112 Q0113 D-205A-224AG-5FG-103AG-111AG-11 **— 101 — VIDEO VIDEO**

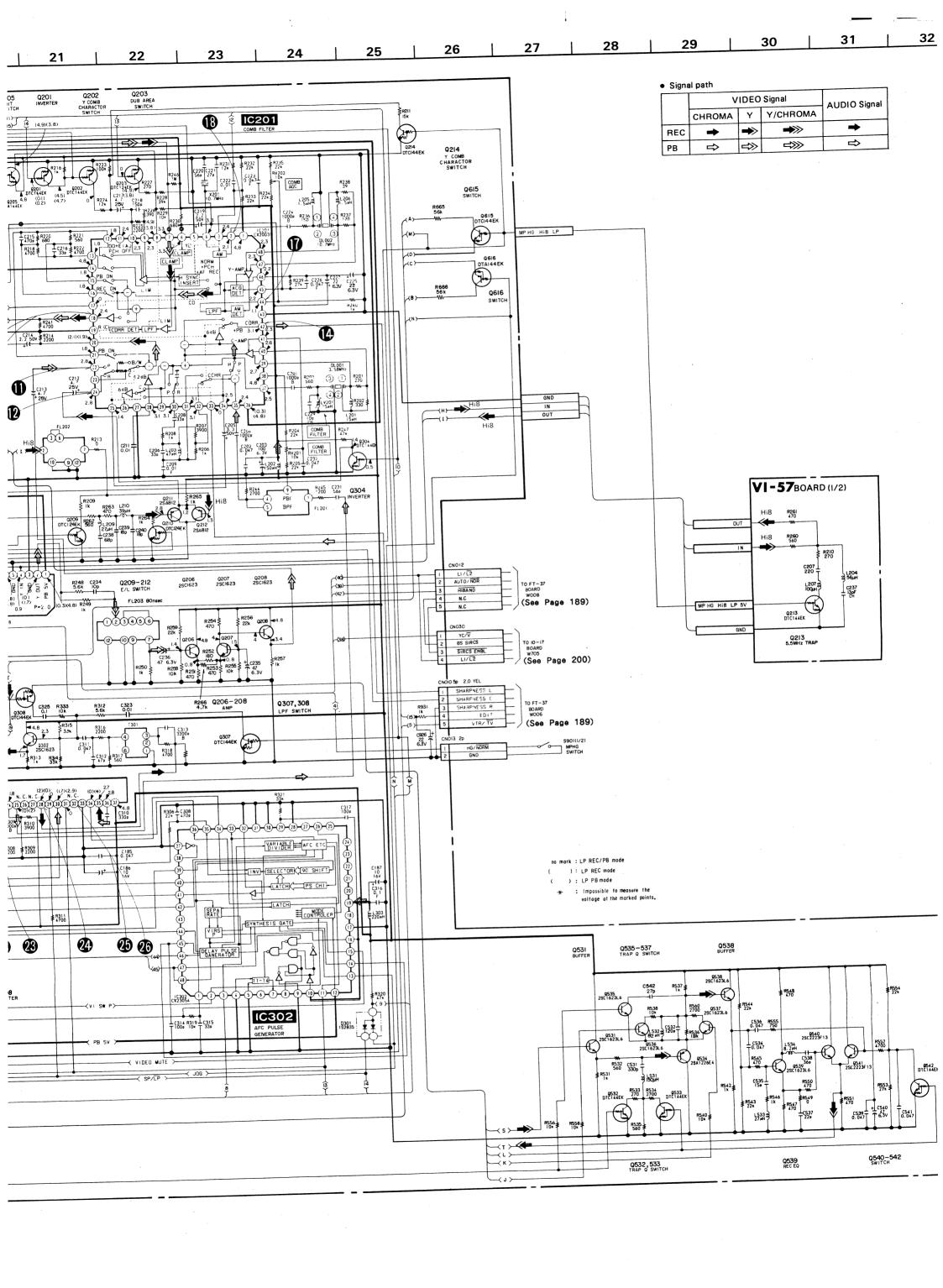
-102 -

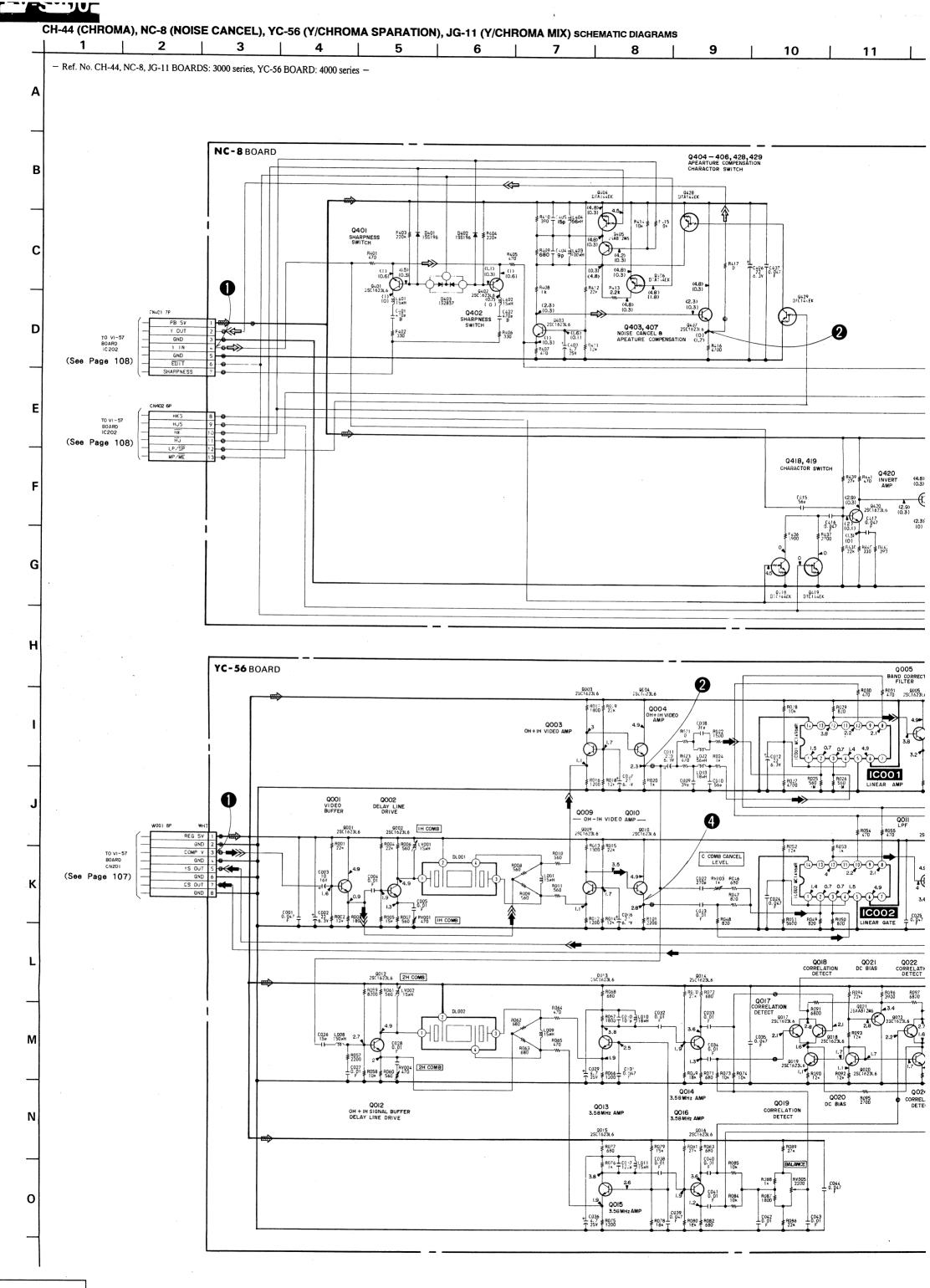


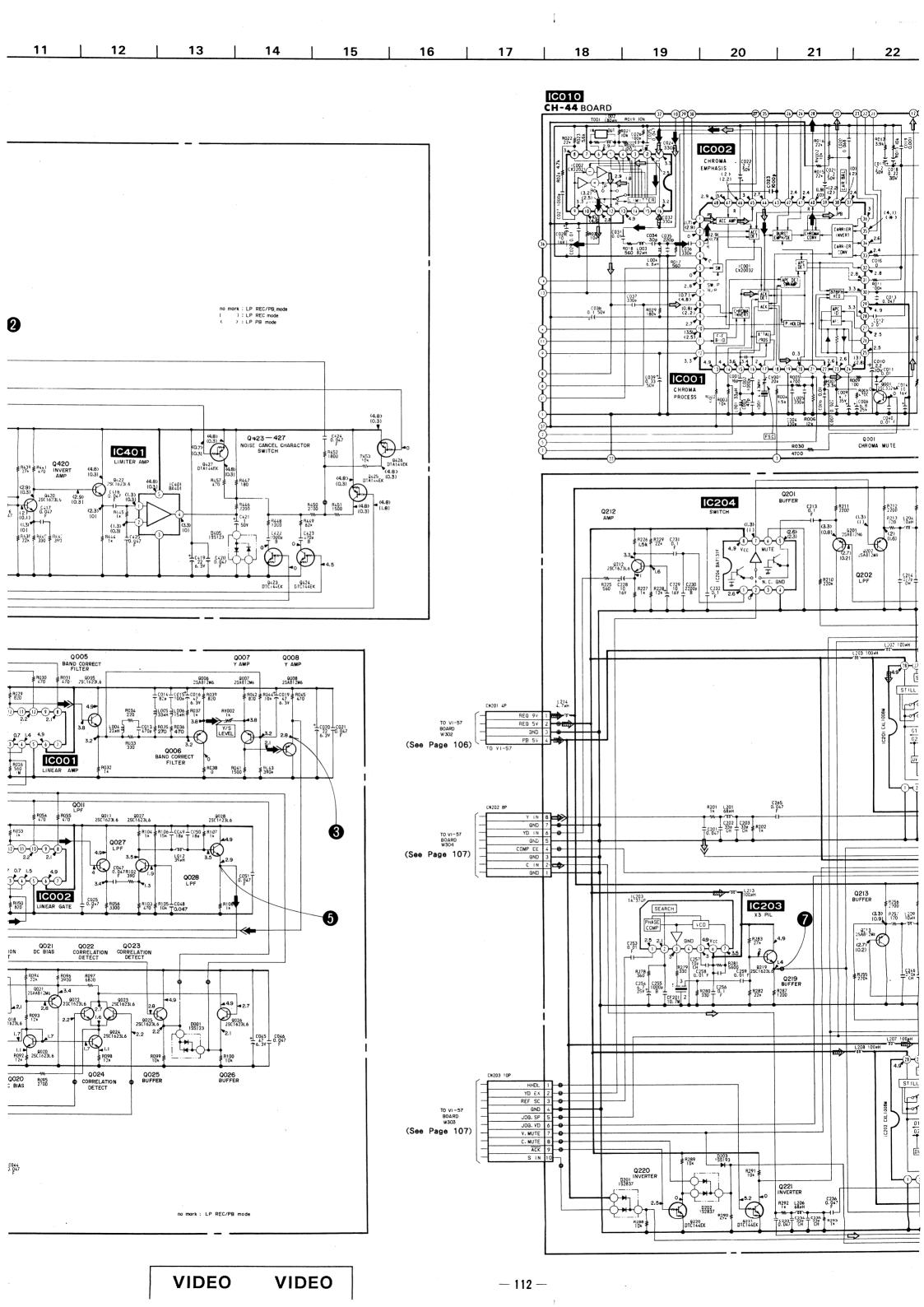


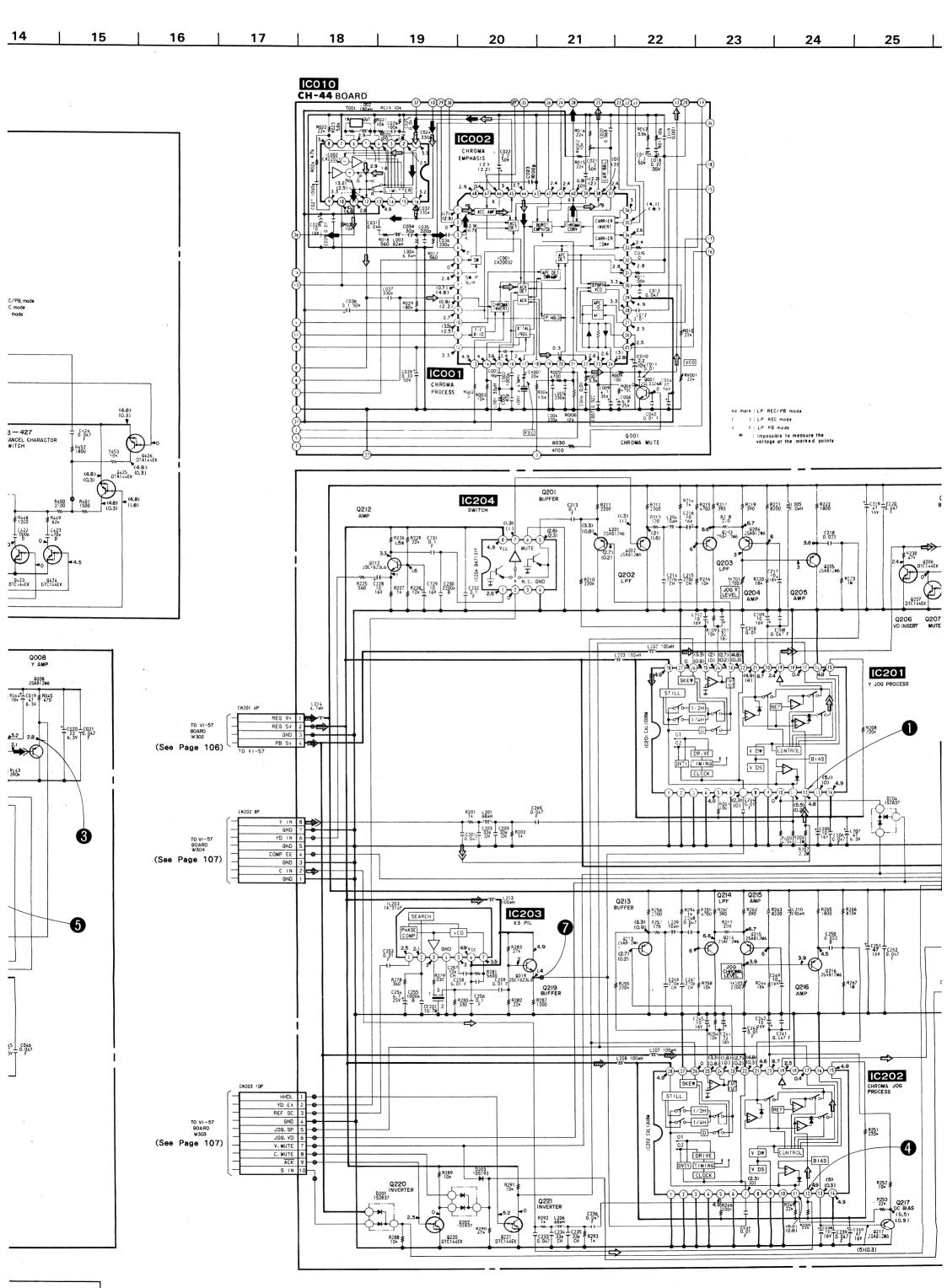


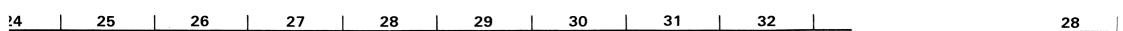


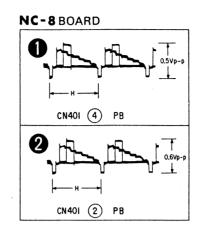


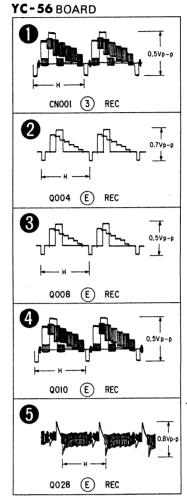


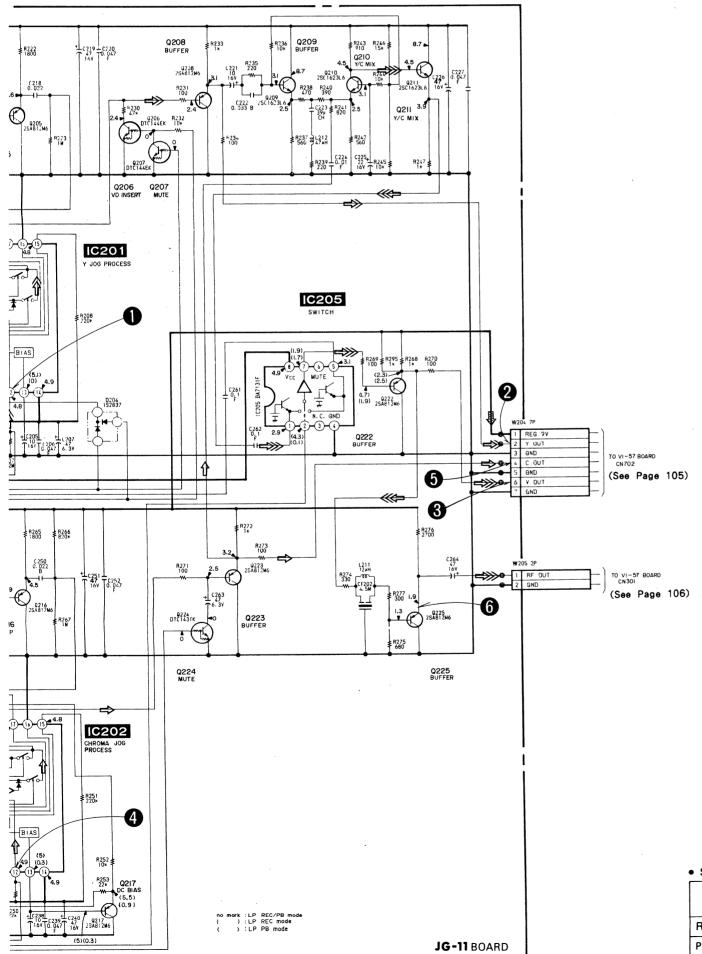


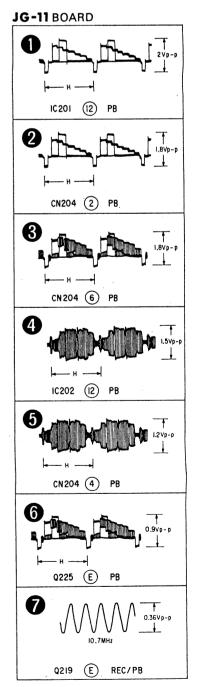












Signal path

| | VIDEO Signal | | | AUDIO Signal |
|-----|--------------|--------------|--------------|--------------|
| | CHROMA | Υ | Y/CHROMA | AODIO Signal |
| REC | → | →> | * >>> | |
| РВ | ⇧ | ↔ | ☆≫ | |

VIDEO

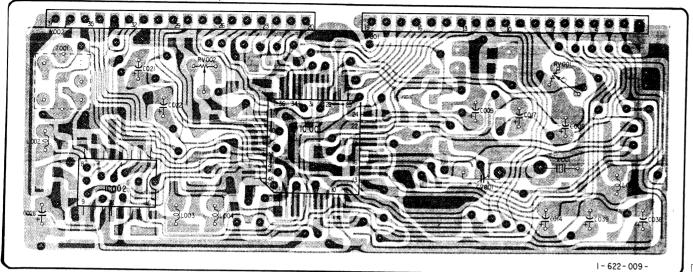
ure the ked points

CH-44 (CHROMA), NC-8 (NOISE CANCEL), YC-56 (Y/CHROMA SPARATION), JG-11 (Y/CHROMA MIX) PRINTED WIRING BOARDS

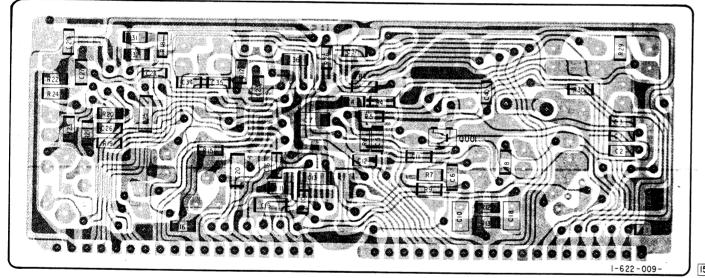
- Ref. No. CH-44, NC-8, JG-11 BOARDS: 3000 series, YC-56 BOARD: 4000 series -



CH-44 BOARD (COMPONENT SIDE)



ICO10 CH-44 BOARD(CONDUCTOR SIDE)



Caution:

Pattern face side: (Conductor Side)

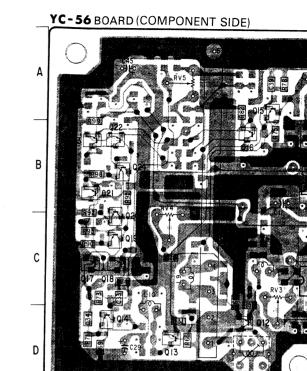
Parts on the pattern face side seen from

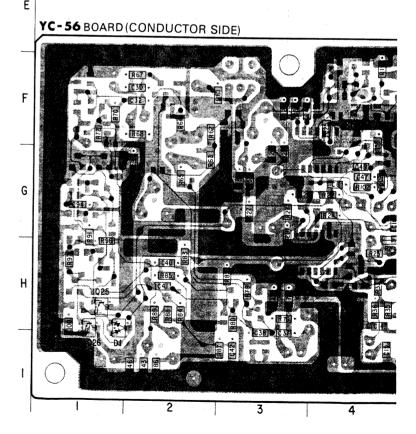
Parts face side:

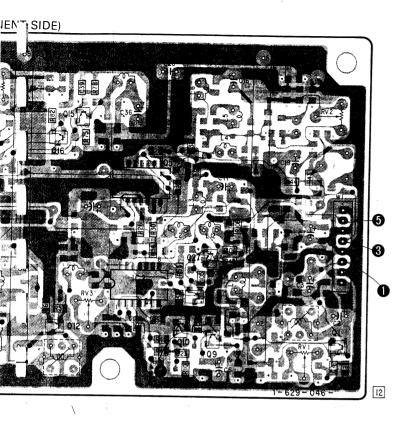
Parts on the parts face side seen from the

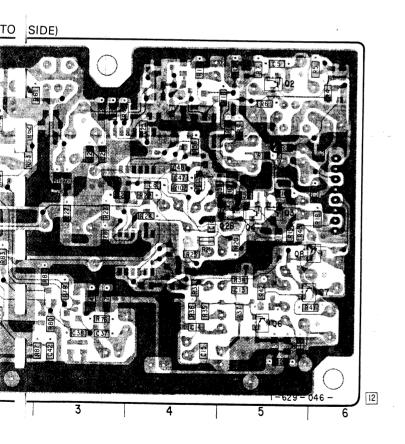
(Component side) parts face are indicated.

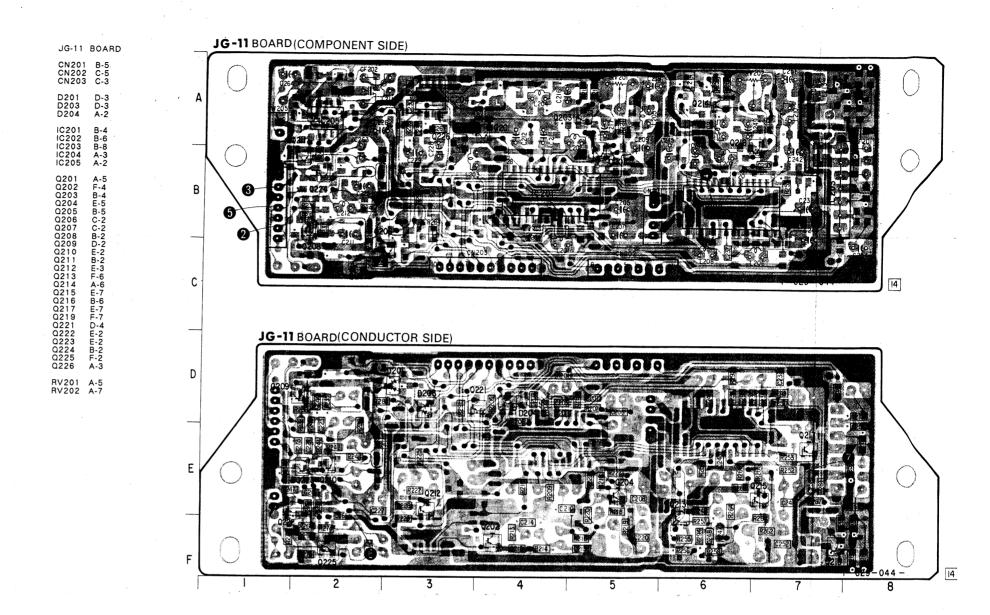
YC-56 BOARD D001 I-1 LV001 D-5 LV002 D-3

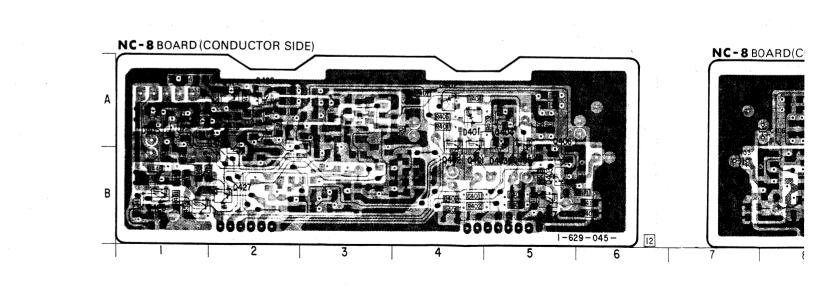












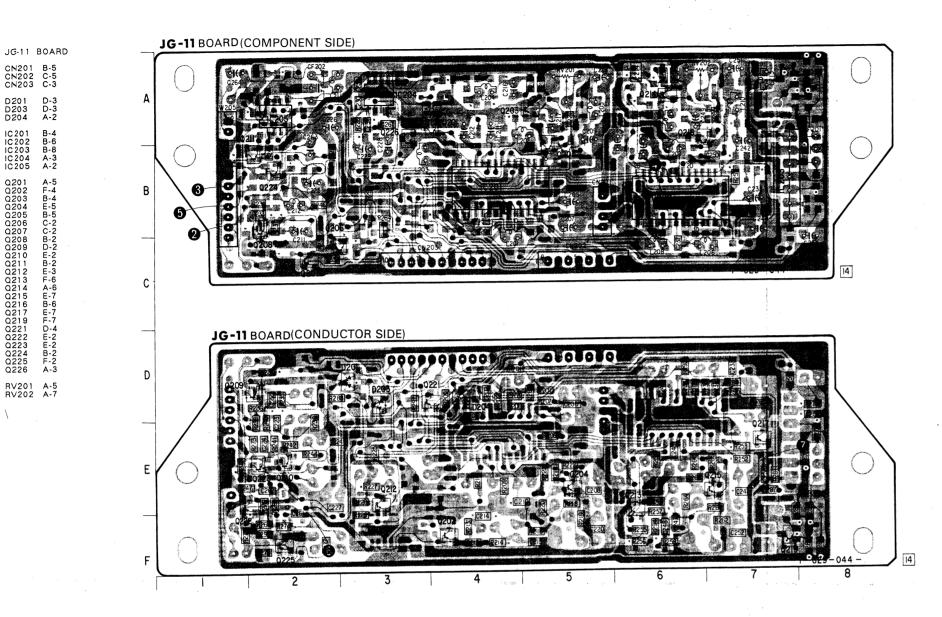
NC-8 BOARD CN401 B-8 CN402 B-11

A-4 A-4 B-5 B-3 A-1

D401 D402 D403 D404 D405

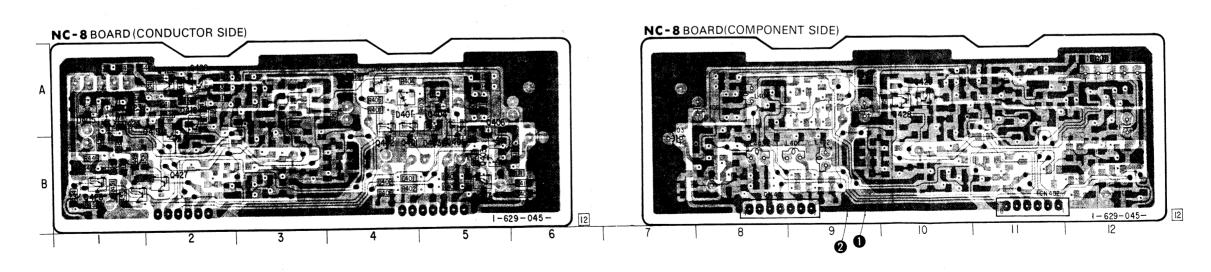
Q401 Q402 Q403 Q404 Q405 Q407 Q407 Q412 Q413 Q414 Q415 Q417 Q418 Q419 Q422 Q423 Q424 Q425 Q426 Q427 Q429

IC401 A-1



NC-8 BOARD CN401 B-8 CN402 B-11 D401 A-4
D402 A-4
D403 B-5
D404 A-1
C401 A-1
C401 B-4
C402 B-4
C403 B-5
C406 B-5
C406 B-5
C406 B-5
C406 B-3
C411 A-3
C412 A-3
C413 A-3
C414 B-3
C415 A-3
C415 A-3
C416 B-2
C420 A-2
C422 A-2
C422 A-2
C422 A-1
C424 B-1
C426 B-1
C426 B-1
C426 B-1
C427 B-2
C429 A-1
C428 A-1 8-4555553333332322221111121000 8-4555553333332322221111121000

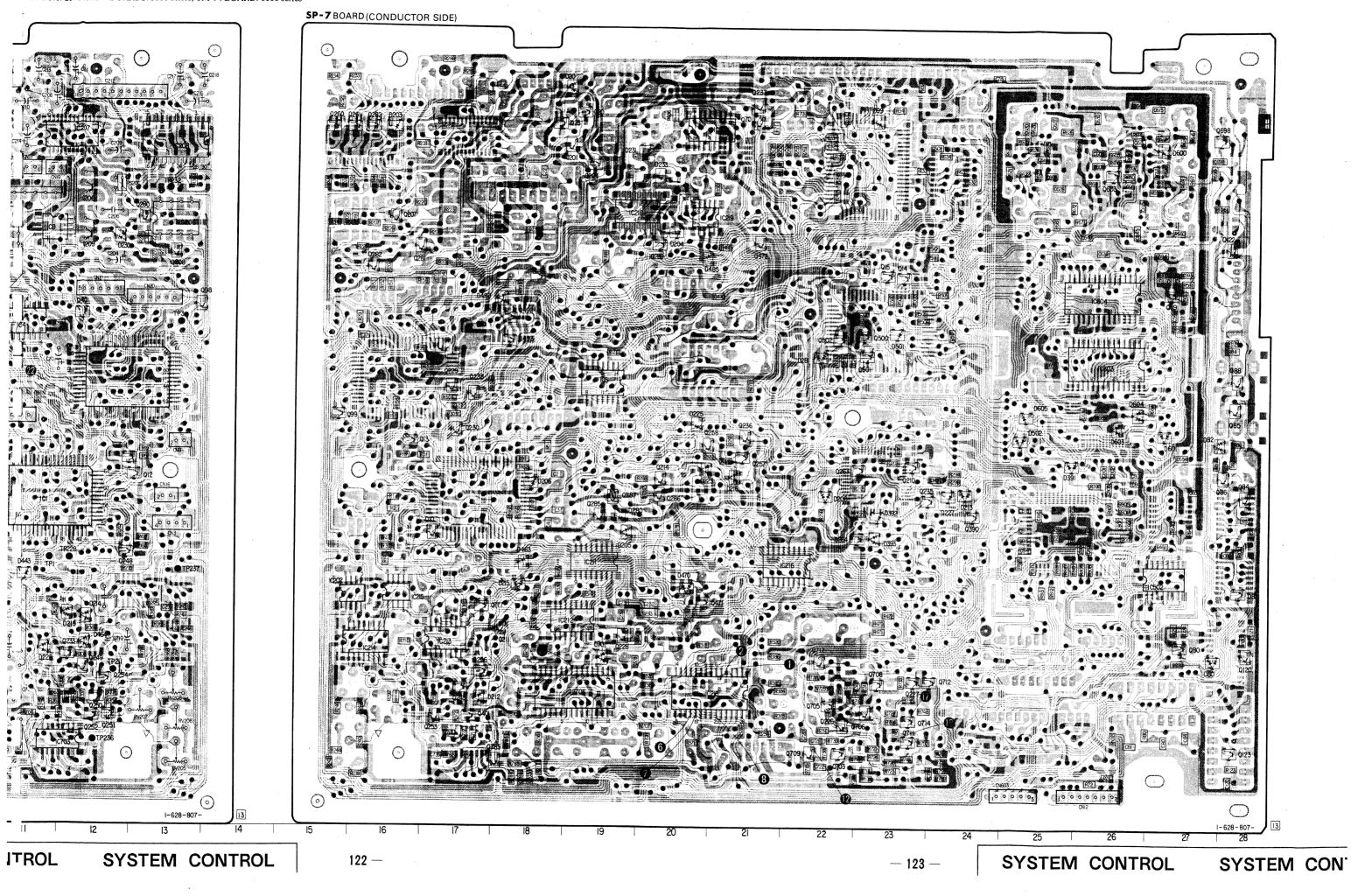
D201 D203 D204

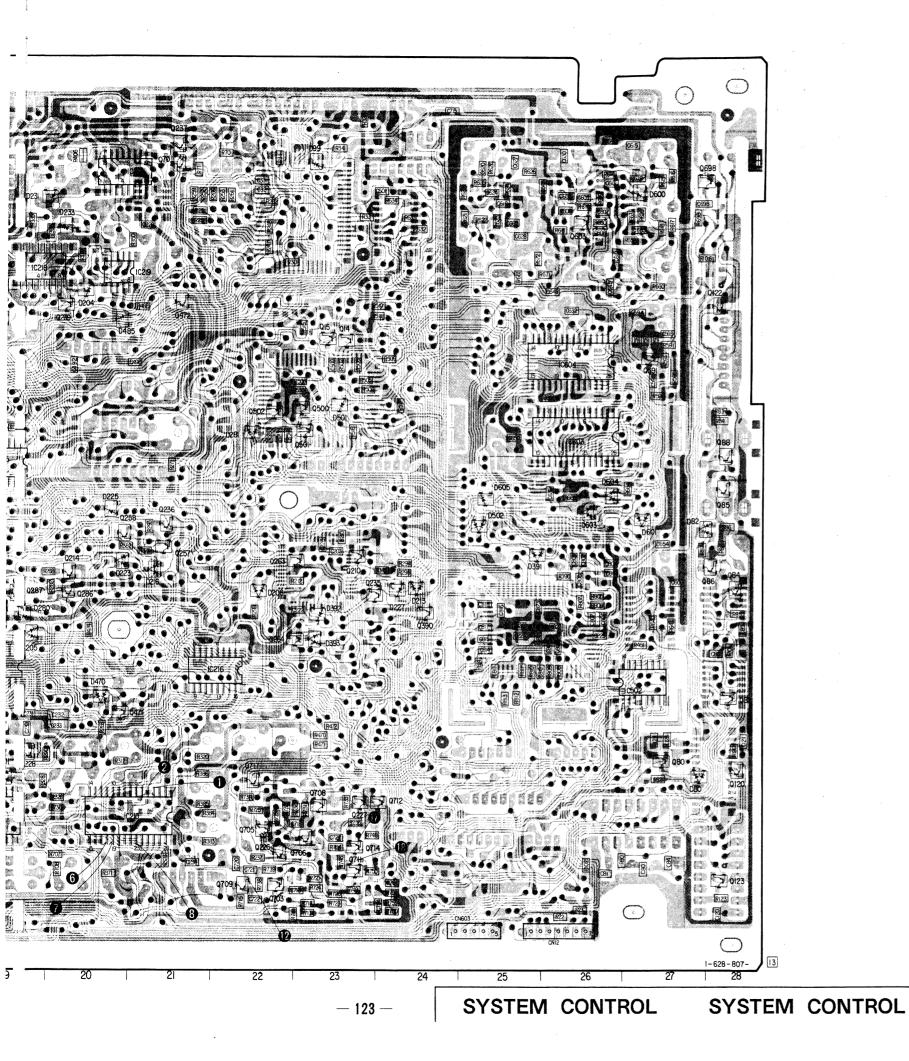


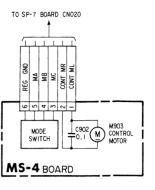
— 121 —

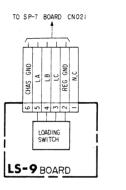
SYSTEM CONTROL

SYSTEM CONTROL





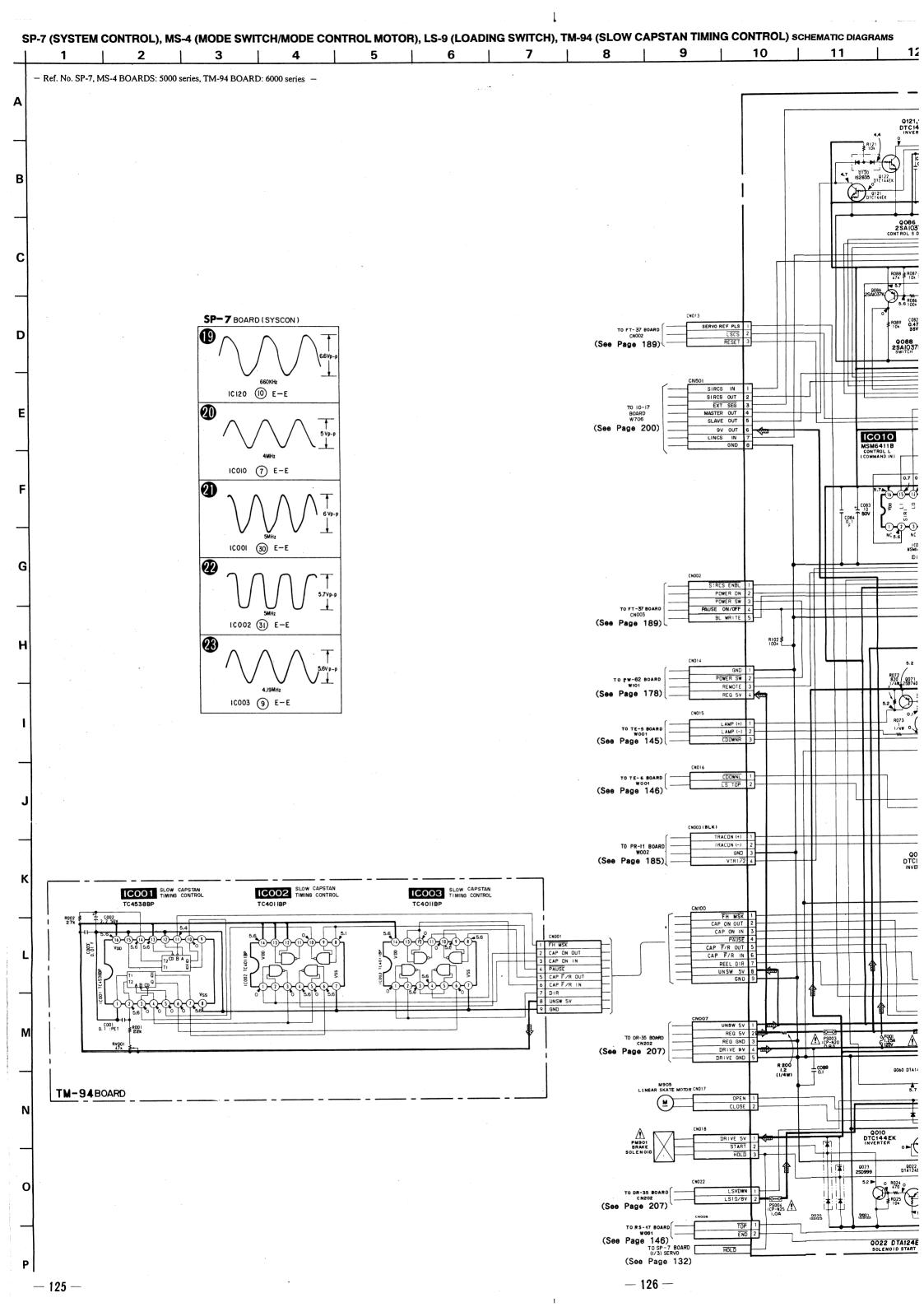


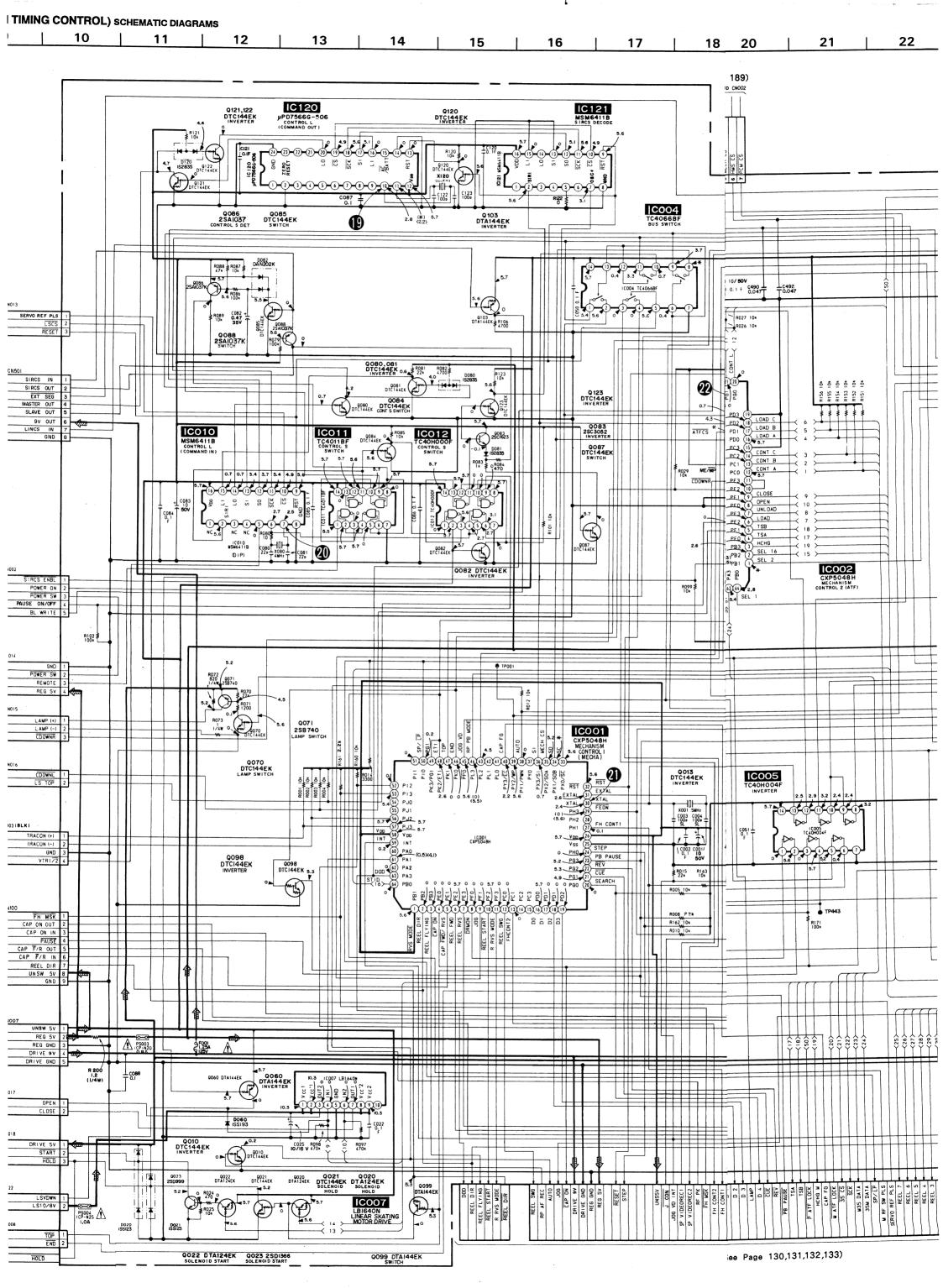


Caution:

Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.

Parts face side: Parts on the parts face side seen from the parts face side seen from the parts face are indicated.





32

TO VI-57 BOARD WOO1 (See Page 107) 0015 DTA144EK R022 R013 22k 0014 DTC144EK R023 DO99 Q014,015,090,09 DTC144EK DOD SWITCH **↓** 1 MFE ON 2 ME/MP D098 IS2835 (See Page 94) CAPON PCM REC MFE ON R156 R155 R154 R153 R151 MPDATA با ← دوءه **50∨** IC003 PMDATA 33 P143 33 P143 34 P142 35 P141 36 P140 37 N.C. 39 P33 NTSC / PAL 10 P32 REC PROOF 10 P31 SMF/MP 10 P31 SMF/MP 10 P43 P43 P42 41 P42 PD75104 MECHANISH CONTROL 3 (HMS) SCK PCM CS TO SP- 7 BOARD (1/3) PTHO2 (3)
PHO3 (1)
PHO3 (1)
P10/INT1 (3)
P11/INT1 (7)
P12/INT2 (8)
P13/INT3 (7)
Vss (5) P131

P132

P133

P136

P137

P127

P127 (See Page 154) CLOCK CLOCK RESET EWERG OFF TEST P12/INT2 (1)
P12/INT2 (1)
P12/INT3 (1)
P13/INT3 (1)
P13/I REG 5V UNS 5V IC002 ₹R034 ¥R032 S901(1/2) F052 10k REG GND
2 REC PROOF R018 10k 0 0 0012 DTC144EK DTC144EK S902 RECOG SWITCH L 1 REG GND 2 T10/ T13 MB3763PF CONTROL MOTOR DRIVE MB3763P LOADING MOTOR DR:VE -< 42 ≻ TFG 2 REG GND TO RS-IT BOARD ≺ 41 > (See Page 146) 5.3 5.3 5.3 5.3 MS-4BOARD TP443 1 LOAD 2 UNLOAD C902 1 CONT L CONT R 5 MA 6 REG GND no mark: LP REC/PB mode

(): LP REC mode

(): LP PB mode LOADING SWITCH L8 LA CHAS GND LS-9BOARD SP-7 BOARD (1/3) SYSTEM CONTROL TO SP-7BOARD(1/3) 133) (See Page 155)

21

22

23

24

25

26

27

28

29

30

31

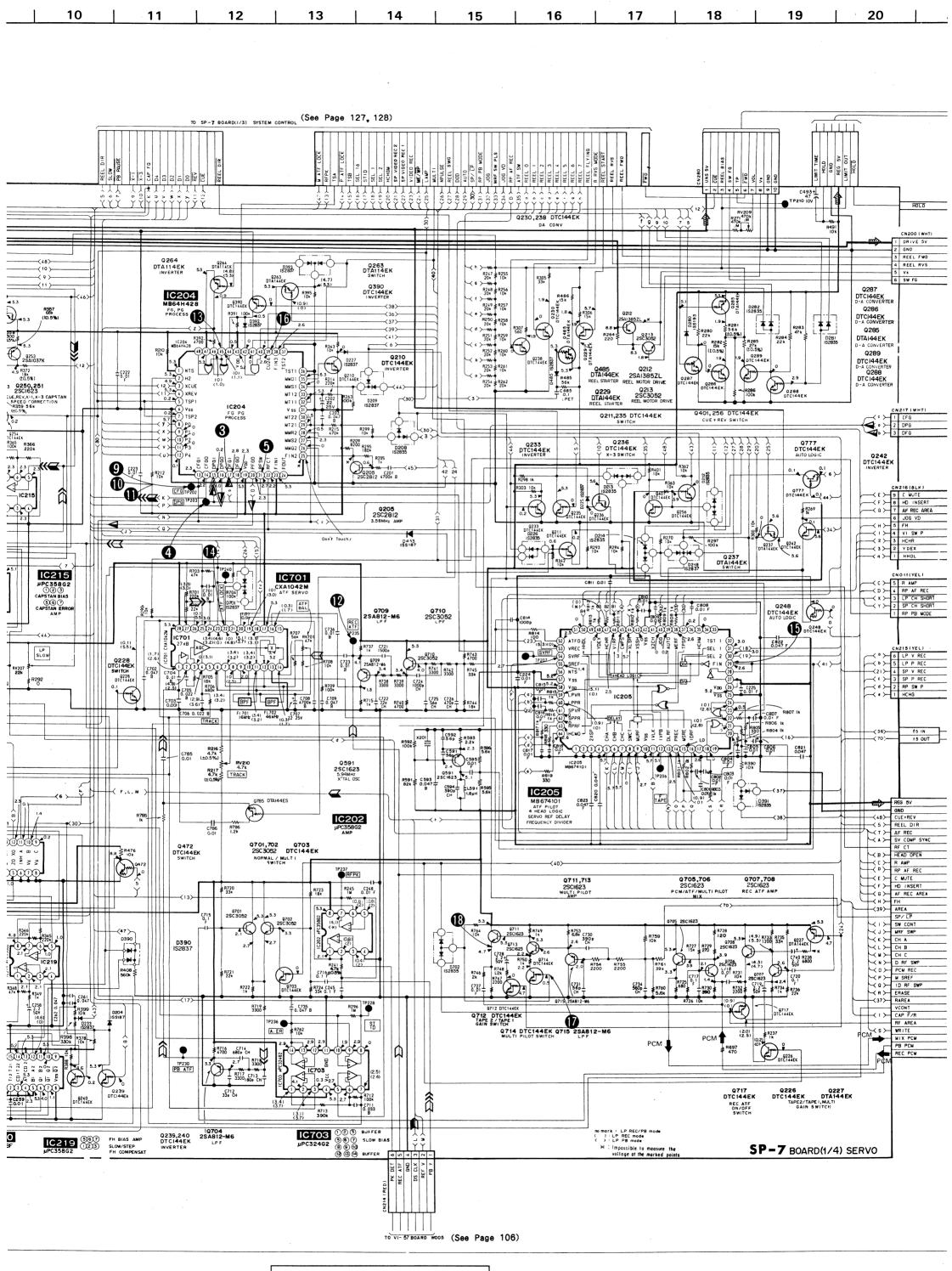
SP-7 (SERVO), DM-18 (MOTOR DRIVE) SCHEMATIC DIAGRAMS 2 10 3 5 8 11 - Ref. No. SP-7, BOARD: 5000 series, DM-18 BOARD: 7000 series -TO SP-7 BOARD(1/3) SYSTEM CONTROL (See Page 127, 128) (See Page 127, 128) TO SP-7 BOARD (1/3) SYSTEM CONTROL Q214,215 DTC144EK D-A CONVERTI Q 252,253 2SA 1037K Q245,249,254,257,258 DTA144EK CUE, REV, X-1,X-3 CAPSTAN SPEED CORRECTION R268 22K LASOOSM DRUM SV REG Q264 DTA114EK INVERTER IC204 0245 DTA144EK - 5.3 Q2O2 TC114EK RESET R357 68k (±0.5%) DTC114EK 0 IC204 MB64H428 9203 2501406Y 0250,251 2SC1623 G203 2SD1406 R382 IC210 ((= 9 10 11 2 3 1 C236 2.2 1.8 1.7 8326 68000 3300 **O** B R376 ≸ ₹R377 220k ≸ ₹220k 0463 ISS190 33k W 0464 DAP202K R334 C241 470k 0. 022 α 0 0 5 1 1 1 1 1 1 0 9 IC211 IC213 IC215 3 4 5 AGC HOLD UPC358G2 123 CAPSTAN BIAS AGC HOLD

(6) (8) (9)

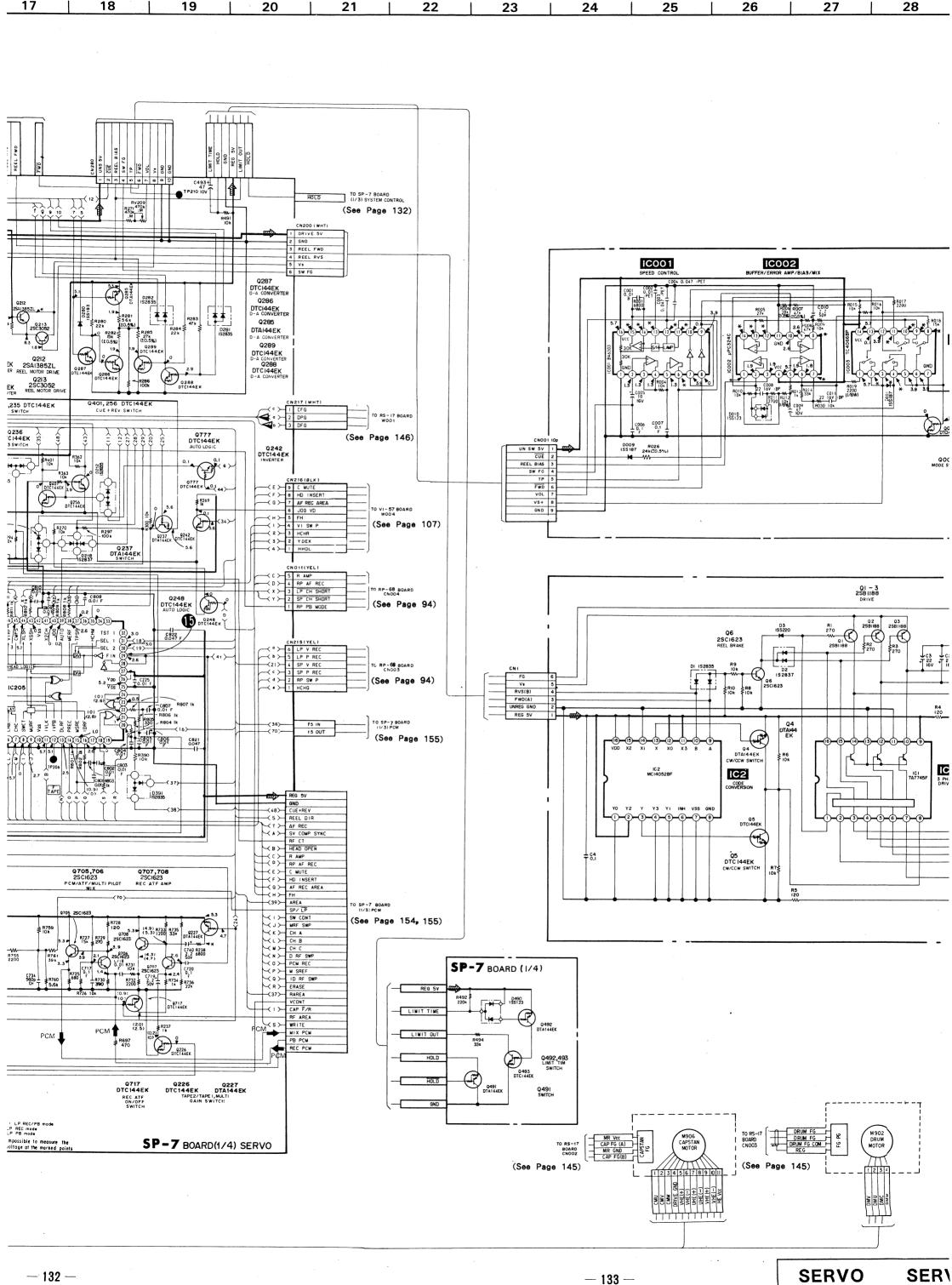
DC GAIN SWITCH

(10) (11) (12)

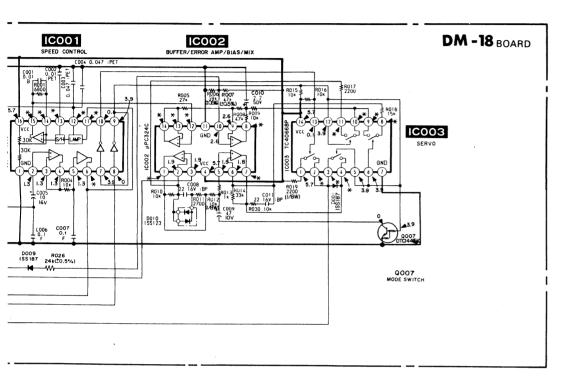
AC GAIN SWITCH IC212 10 50V DRUM ERROR AN B 9 (0) 30HzNOTCH FILTER (2.5)(2.4) LP SLOW Q228 DTC144EK SWITCH DTC144EK RV208 RV205 SP R244 LP R246 FREE 18x FREE 10.5% Q206 2SB1133-R POWER **0280** 2SC3052 a R2I C785 4.7 0.01 (±0.59 IC207 3 > 0281 DTC144EK **R21** 4.7 (±0,€ C208 3.3 R230 R229 50V 150k R229 22k C210 C213 C211 10 C213 C211 25V 50V 25V IC216 IC217 D230 RD5. 1 M 2 C204 O 0. 1 STILL ADJ 1 LP SP FHG Q472 DTCI44EK SWITCH R224 ₹ \$R223 0282 DTC144EK 0246 R267 345678911117 R227 ≱ R226 22k ≯ 10k R386 4700 (±0.5%) Q208 DTC144EK C214 + + + + + + -+ C209 R231 T 25V R231 2SABI2 STARTER * Q260 R309 R308 S60 D**39**0 IS2837 Market Ma 11 C2617 14 C C3617 16 C C3617 17 C C3617 18 C C36 0261 R333 ₹R310 2SD999 10k 560 0262 R351 ₹R344 2SD999 10k ₹ 560 Μ R288 Q260-262 2SD999 CAPSTAN STOP â 0.8 >>> TP230 PB ATF Ν (())))) 1Q7 IC218 (1200 (13) FH CONT SWITCH (4053BF (1) (2) (3) (3) SP/LP SWITCH Q239,240 DTC144EK INVERTER IC220 TC4538BF MMV IC219 (367) µPC358G2 CMV CMV CMW CMW CMW CME(+) VHE(+) VHE(+) DWC DWC 0

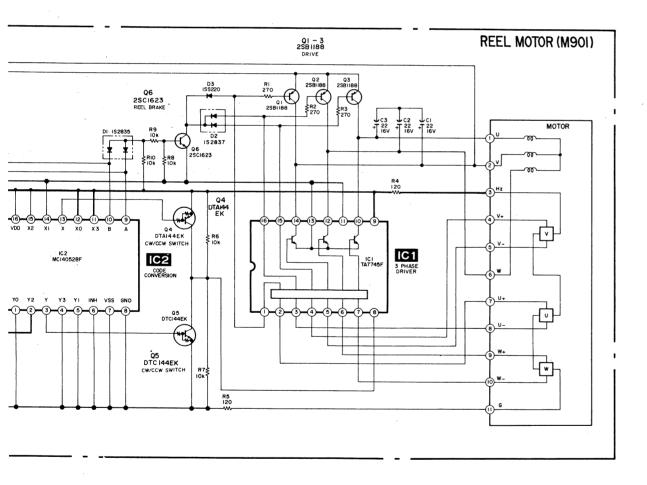


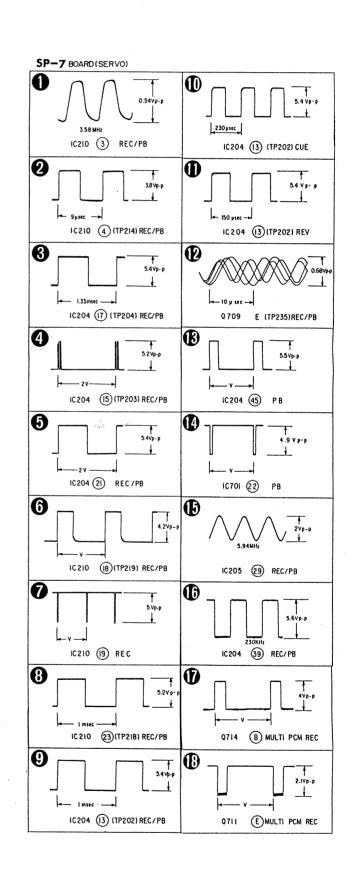
SERVO

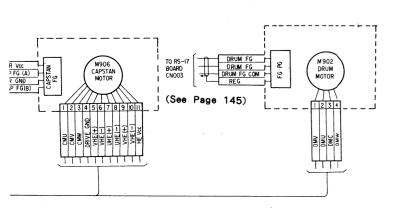


25 26 27 28 29 30 31 32









33 —

REC/PB REC РΒ Drum speed servo \triangleright Drum phase servo Drum servo (speed and phase) **>>>** Capstan speed servo

• Signal path

Capstan phase servo

Ref. signal

Capstan servo (speed and phase)

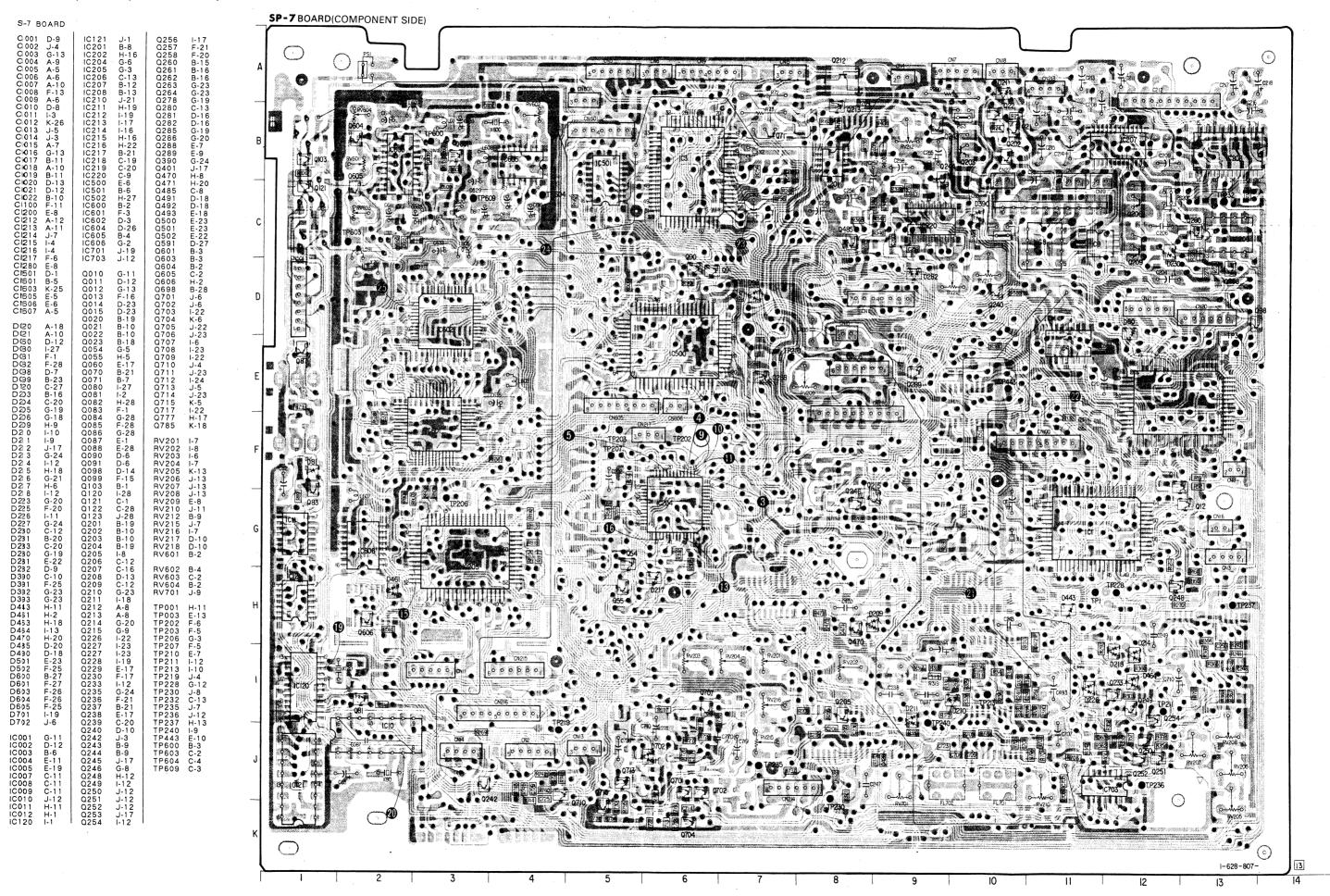
VIDEO Signal **AUDIO** Signal Y/CHROMA Υ CHROMA REC РΒ

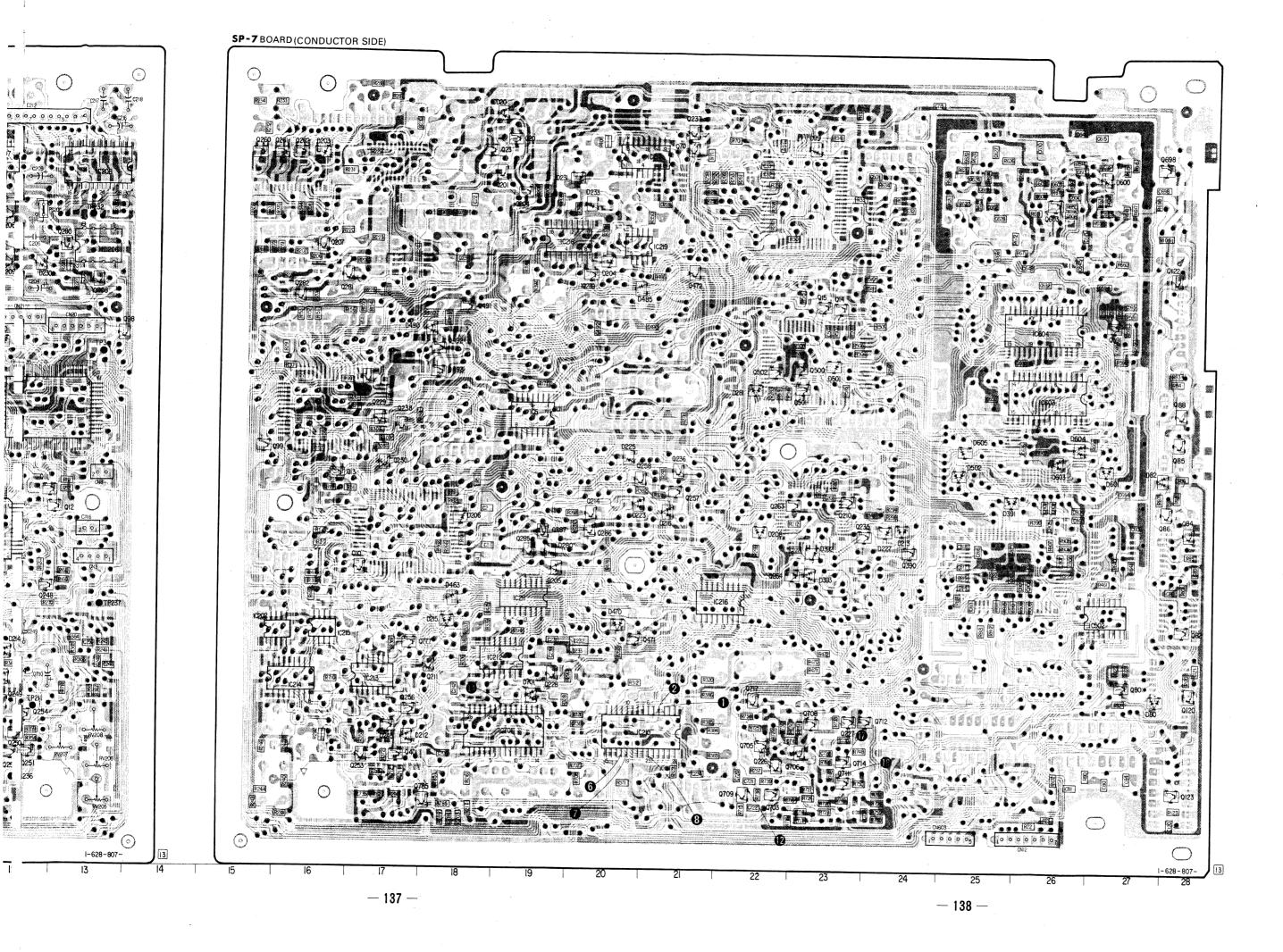
SERVO SERVO \Rightarrow

 Σ

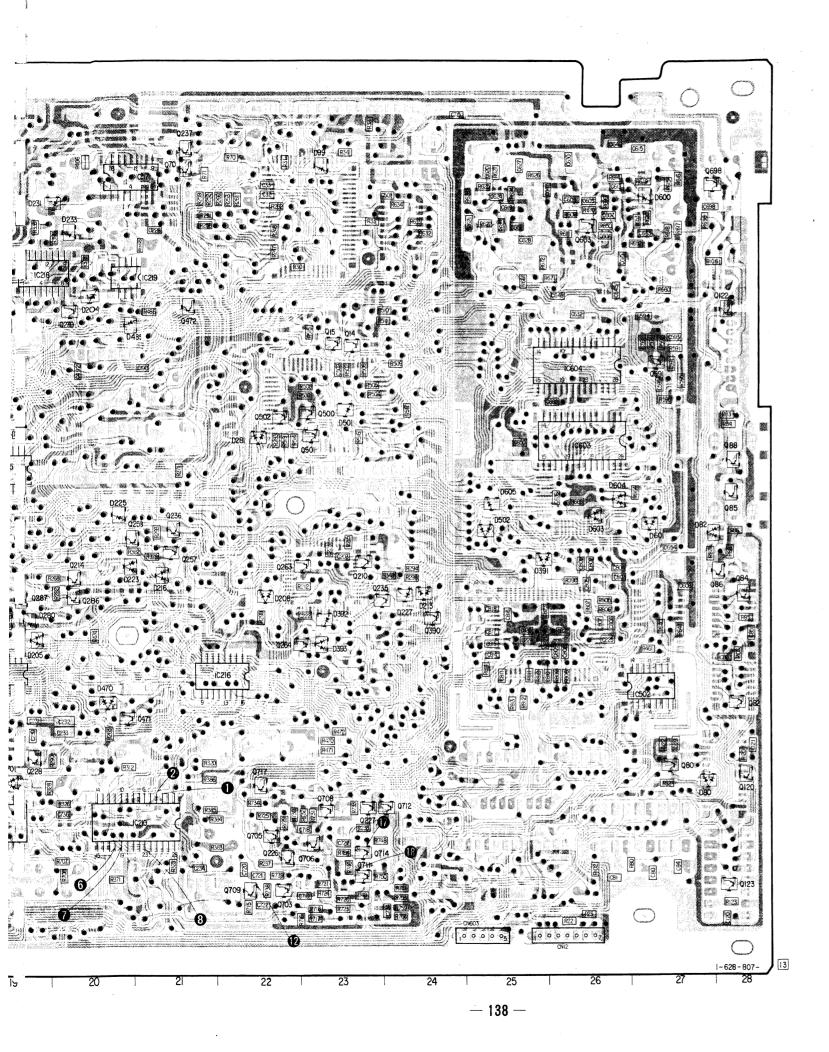
 Σ

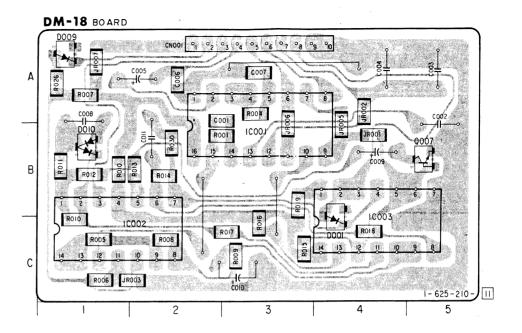
Signal path











Caution:

Pattern face side: Parts on the pattern face side seen from (Conductor Side) the pattern face are indicated.

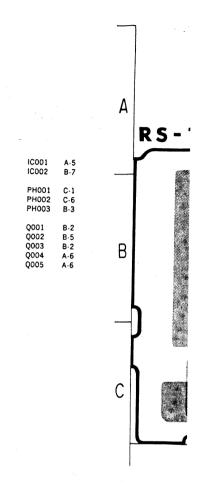
Parts face side: Parts on the parts face side seen from the

(Component side) parts face are indicated.



RS-17 (REEL MOTOR), TE-5 (TAPE T

- Ref. No. LD-1 BOARD: 5000 series, RS-17 BOAR



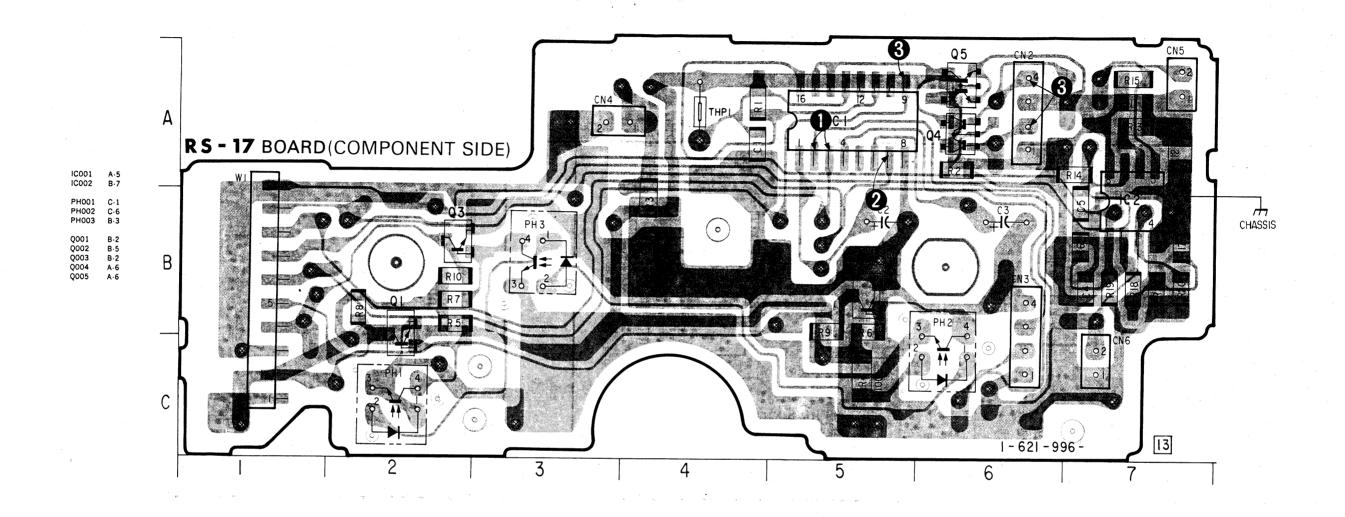
Caution:

Pattern face side: Parts on the pattern face side: Parts on the pattern face Parts face

(Component side) parts face are

RS-17 (REEL MOTOR), TE-5 (TAPE TOP SENSOR), TE-6 (TAPE END SENSOR), LD-1 (LED) PRINTED WIRING BOARDS

- Ref. No. LD-1 BOARD: 5000 series, RS-17 BOARD: 8000 series, TE-5 BOARD: 9000 series, TE-6 BOARD: 10000 series -



Caution:

Pattern face side: (Conductor Side)

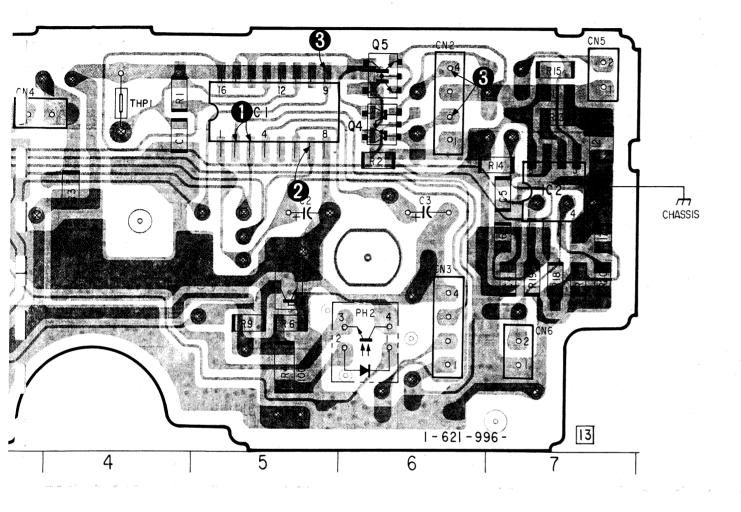
Parts on the pattern face side seen from

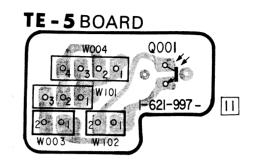
the pattern face are indicated. Parts face side: Parts on the parts face side seen from the

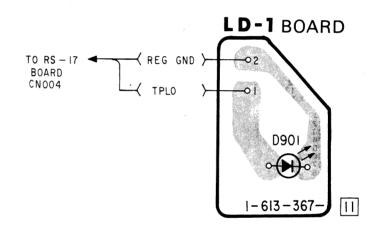
(Component side) parts face are indicated.

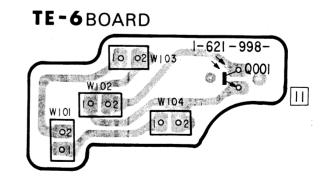
SERVO

140-142

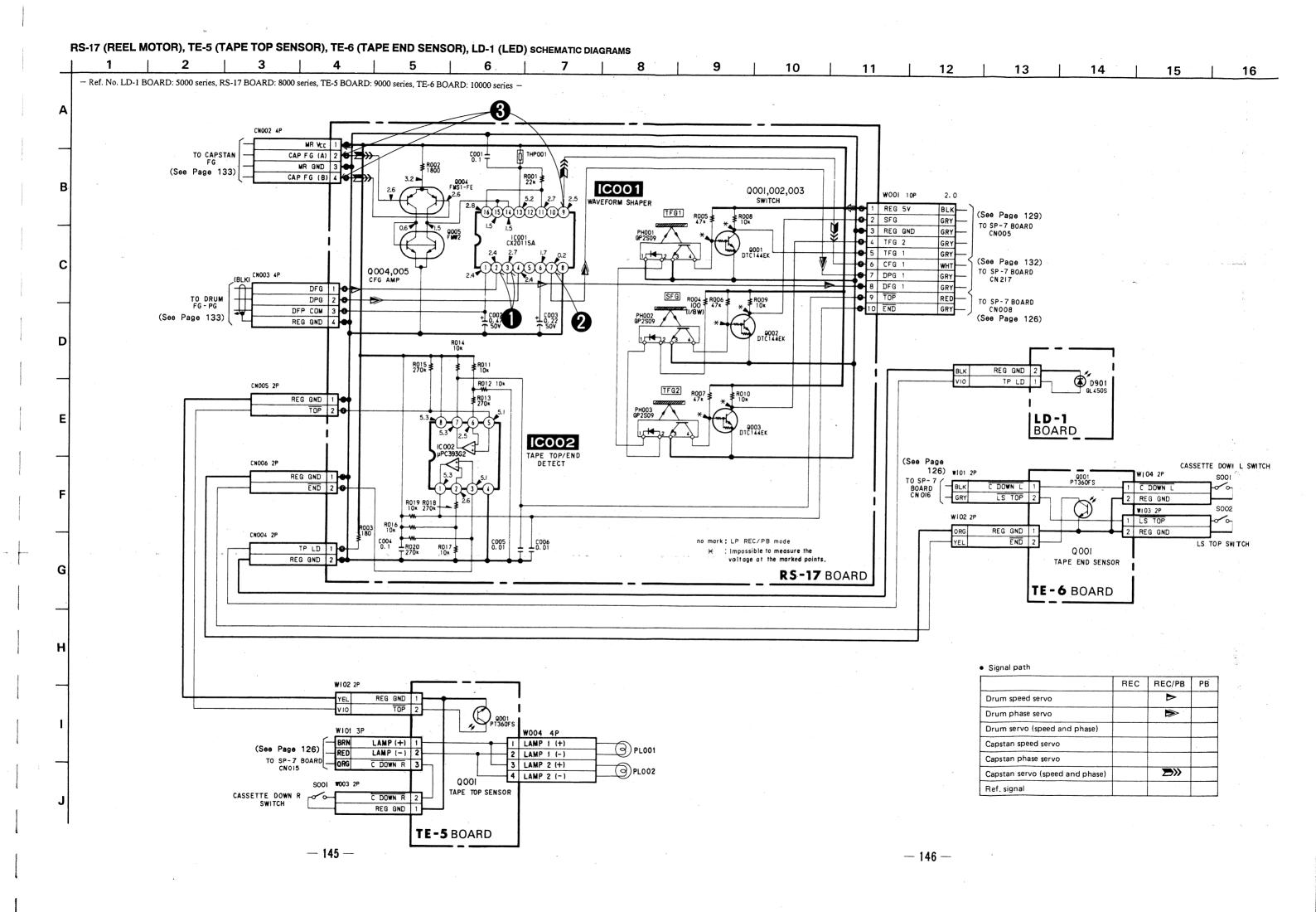






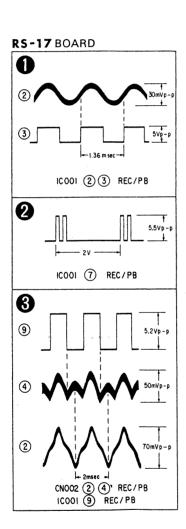


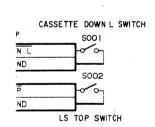
SERVO



15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |

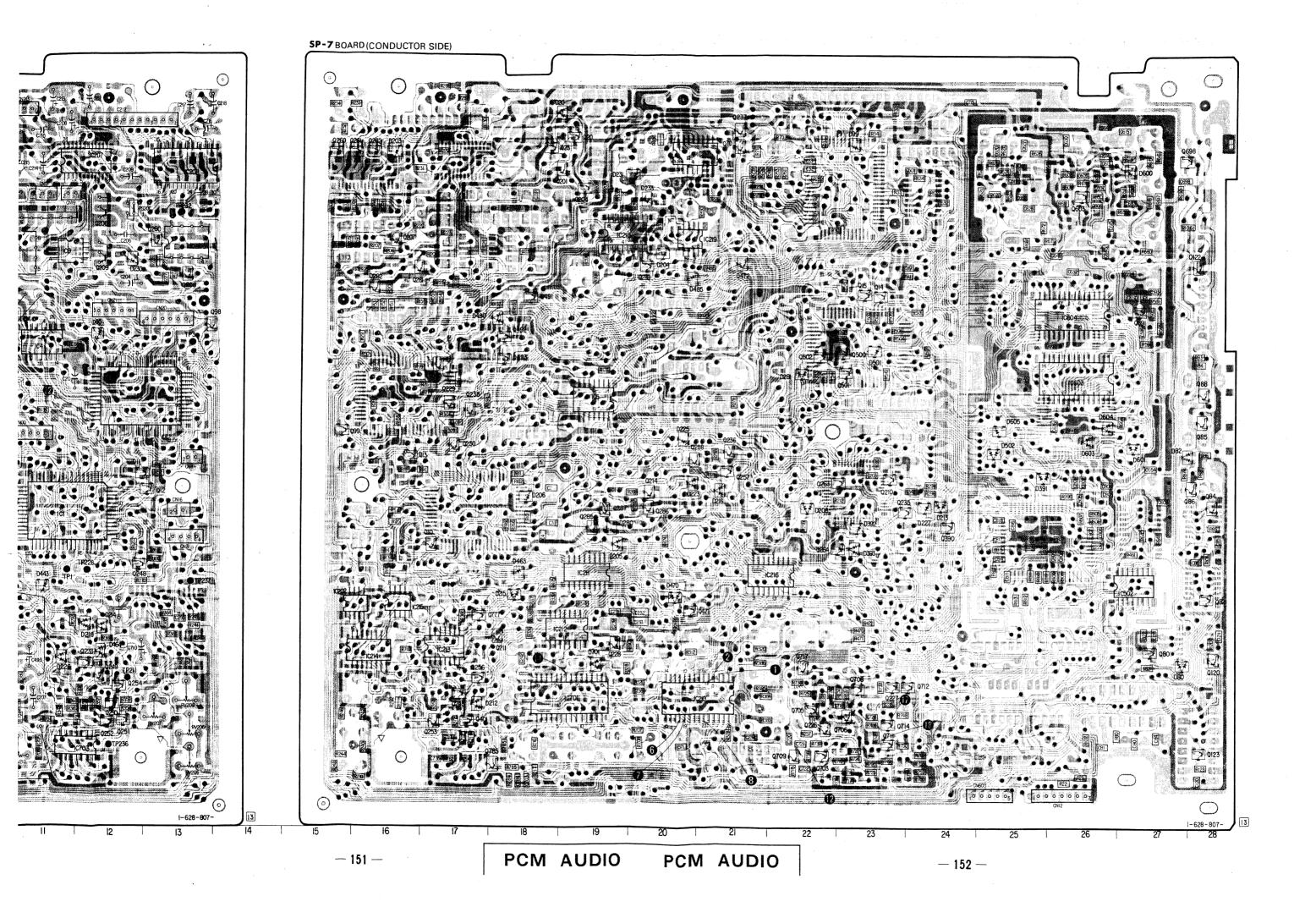
ICOO1 CX20115A II COMP Vcc (3) CAPSTAN (9) FG X2 LOGIC (9) FRE PRE PRE SHIFT (6) GND (8)

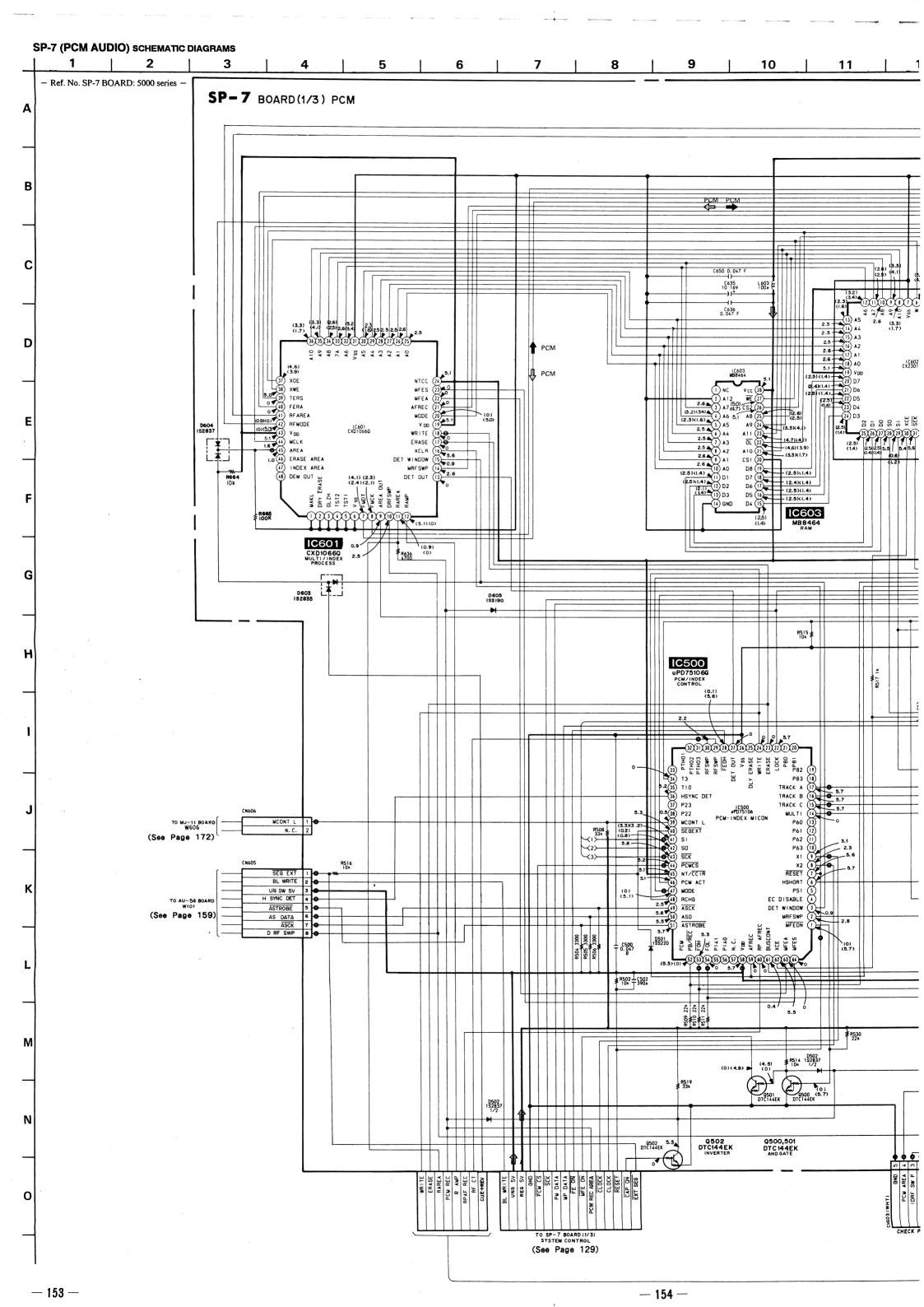


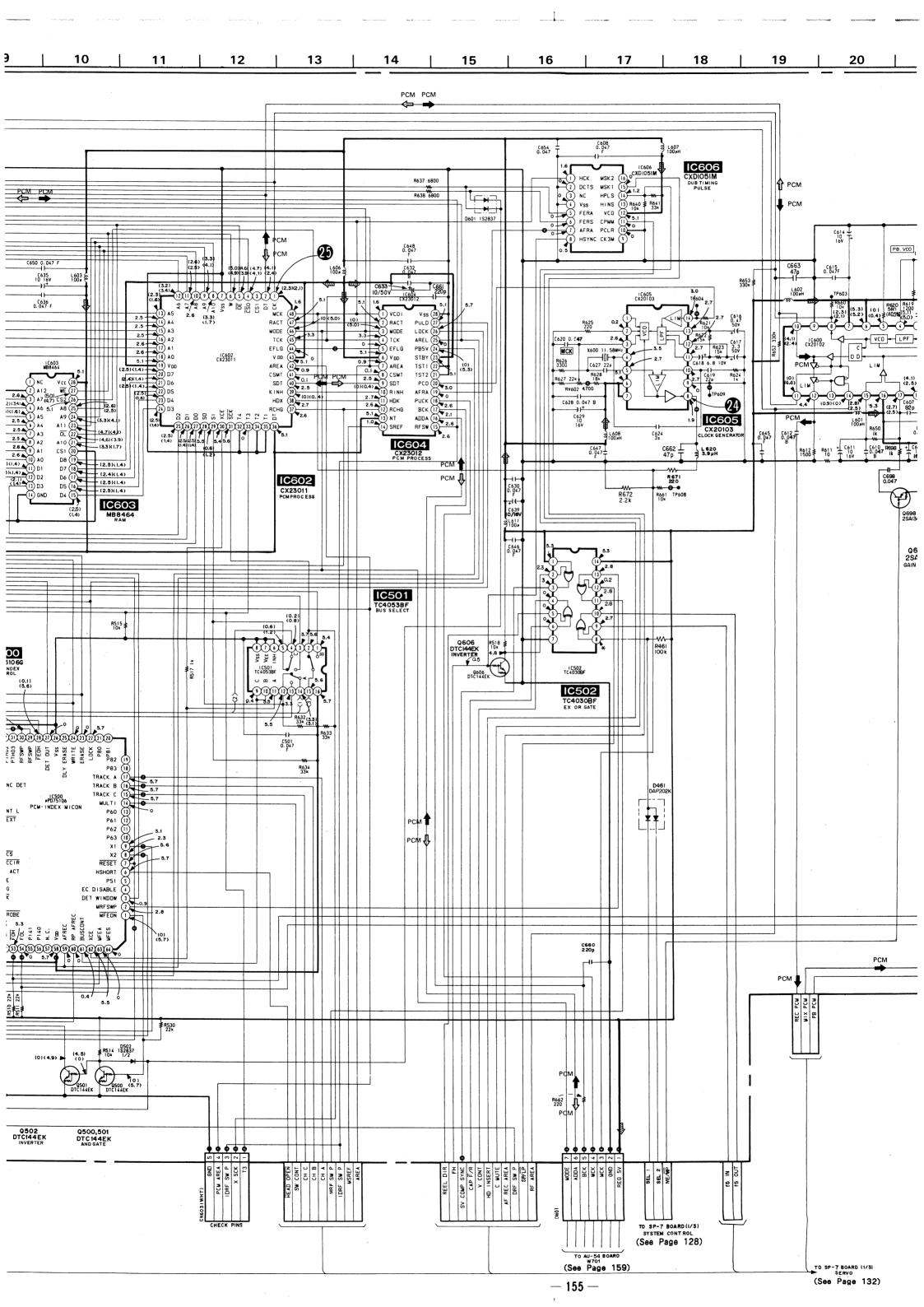


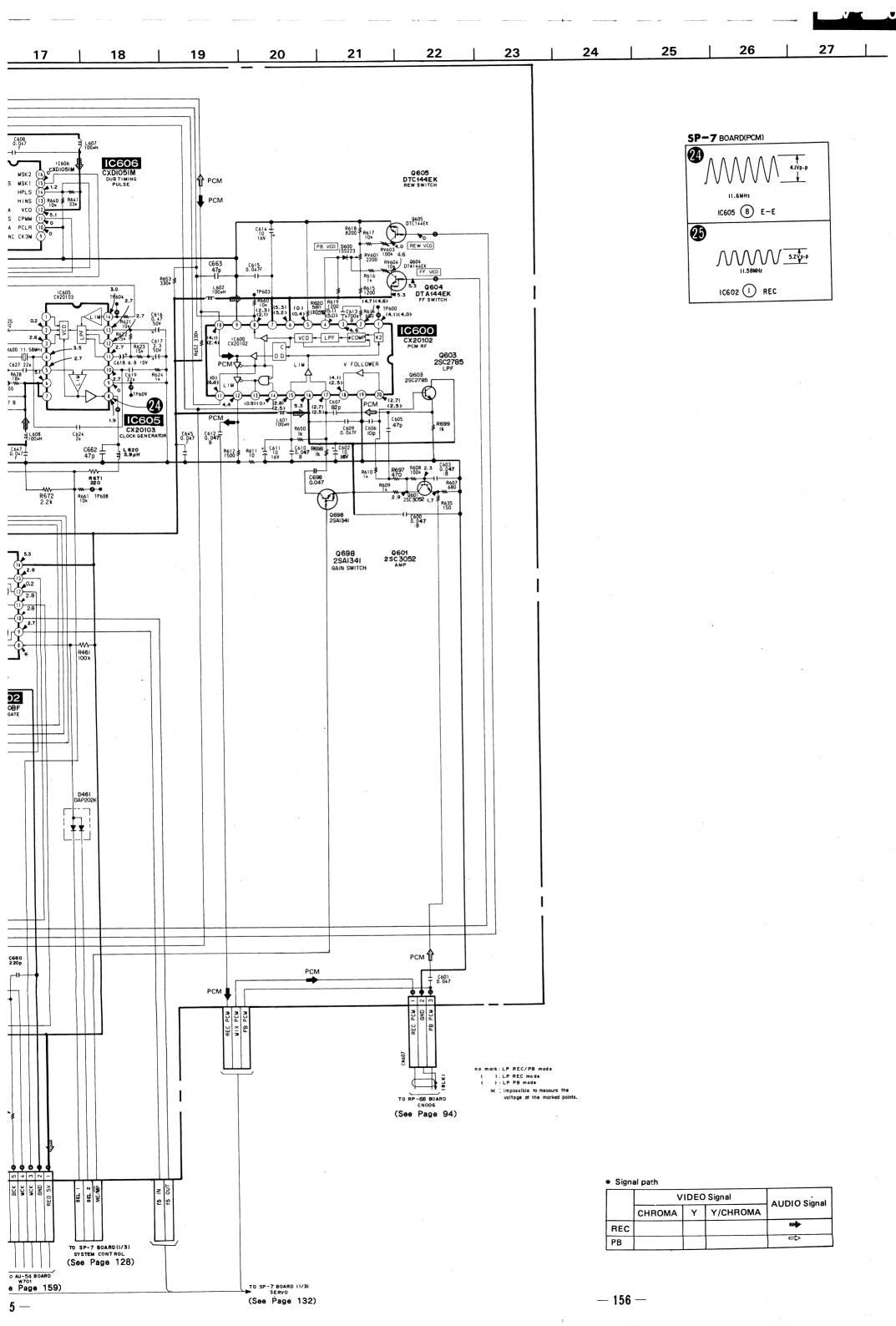
| EC/PB | РВ |
|---------------------|----|
| | |
| ▶ | |
| | |
| | |
| | |
| >>> | |
| | |

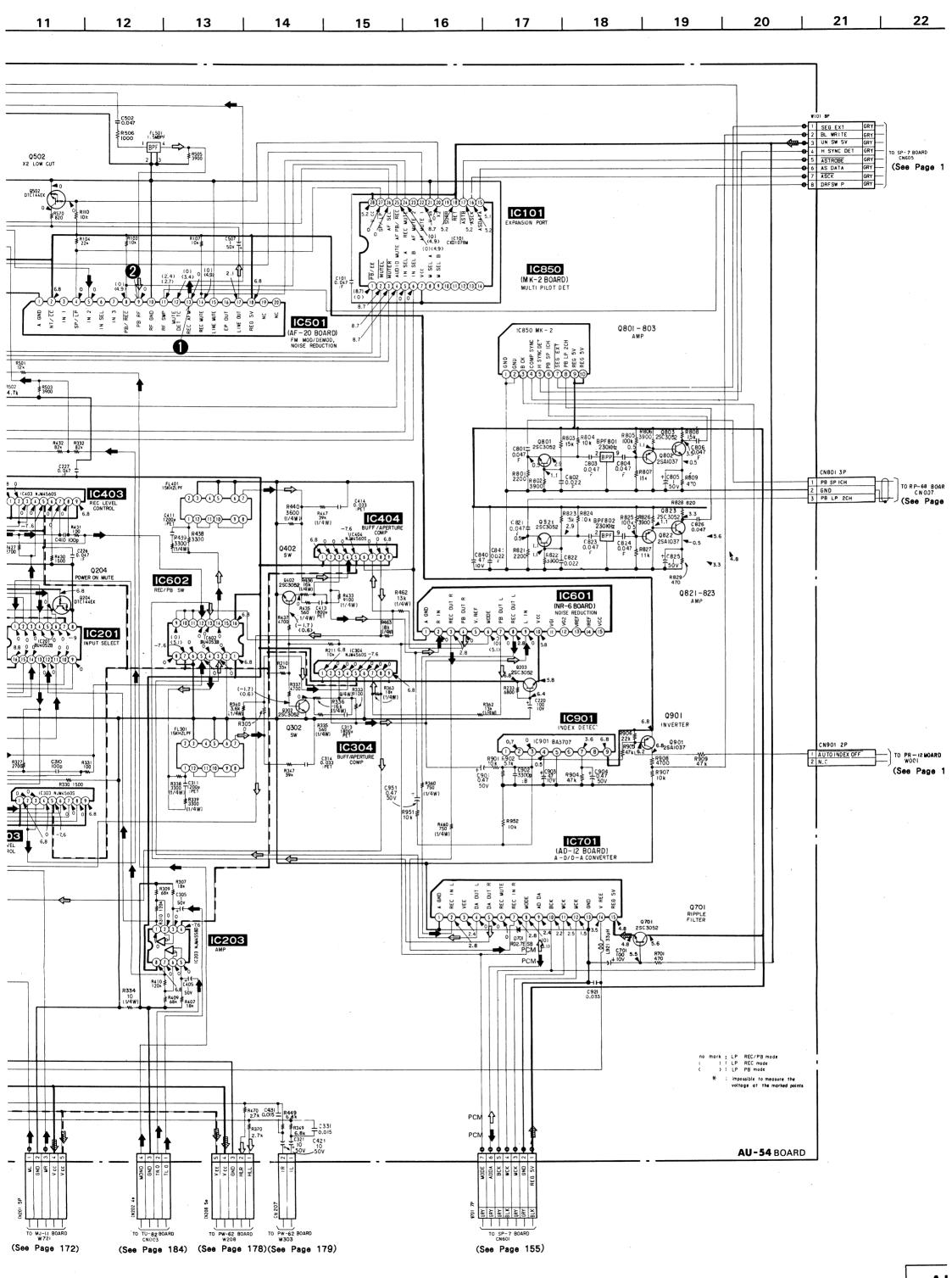
SP-7 BOARD(COMPONENT SIDE) SP-7 BOARD IC121 IC201 IC202 IC204 IC205 IC206 IC207 IC208 IC211 IC212 IC213 IC213 IC213 IC213 IC215 IC216 IC217 IC218 IC219 IC200 IC500 RV201 RV202 RV203 RV205 RV206 RV207 RV208 RV209 RV210 RV212 RV215 RV216 RV217 RV217 RV201 RV602 RV603 RV604 RV701 RV701 J-9
TP001 H-11
TP003 E-13
TP202 F-6
TP203 F-5
TP206 G-3
TP207 F-5
TP210 I-12
TP213 I-10
TP219 J-4
TP228 G-12
TP230 J-8
TP230 J-8
TP235 J-7
TP236 J-12
TP237 H-13
TP237 H-13
TP240 I-9
TP440 I-9
TP440 I-9
TP440 C-4
TP609 C-3 IC001 IC002 IC003 IC004 IC005 IC007 IC008 IC009 IC010 IC011 IC012 IC120 Caution: Pattern face side: Parts on the pattern face side seen from (Conductor Side) Parts face side: Parts on the parts face side seen from the (Component side) parts face are indicated PCM AUDIO -149 -PCM AUDIO **— 150 —**



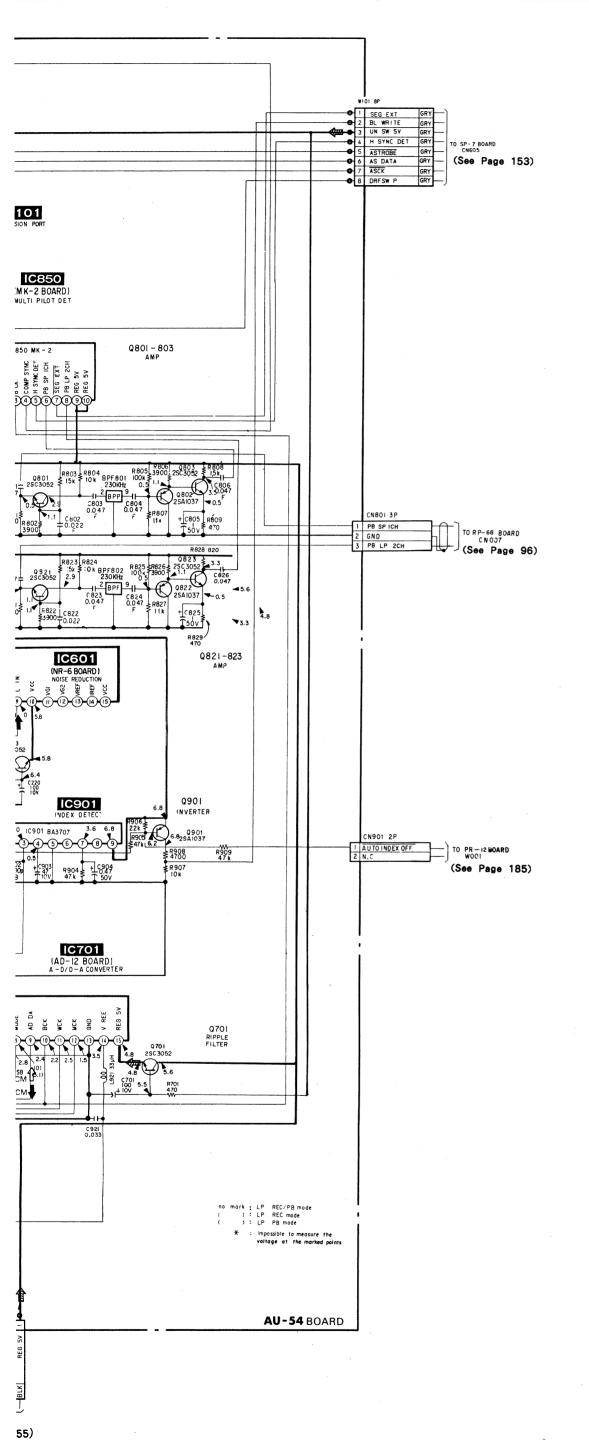




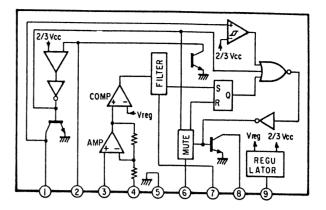




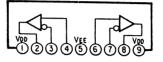




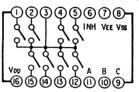
IC901 BA3707



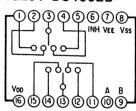
IC301, 303, 304, 401, 403, 404 NJM4560S



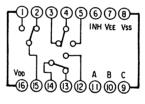
IC302, 402 BU4051B



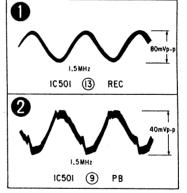
IC201 BU4052B



IC503 602 BU4053B



AU-54 BOARD

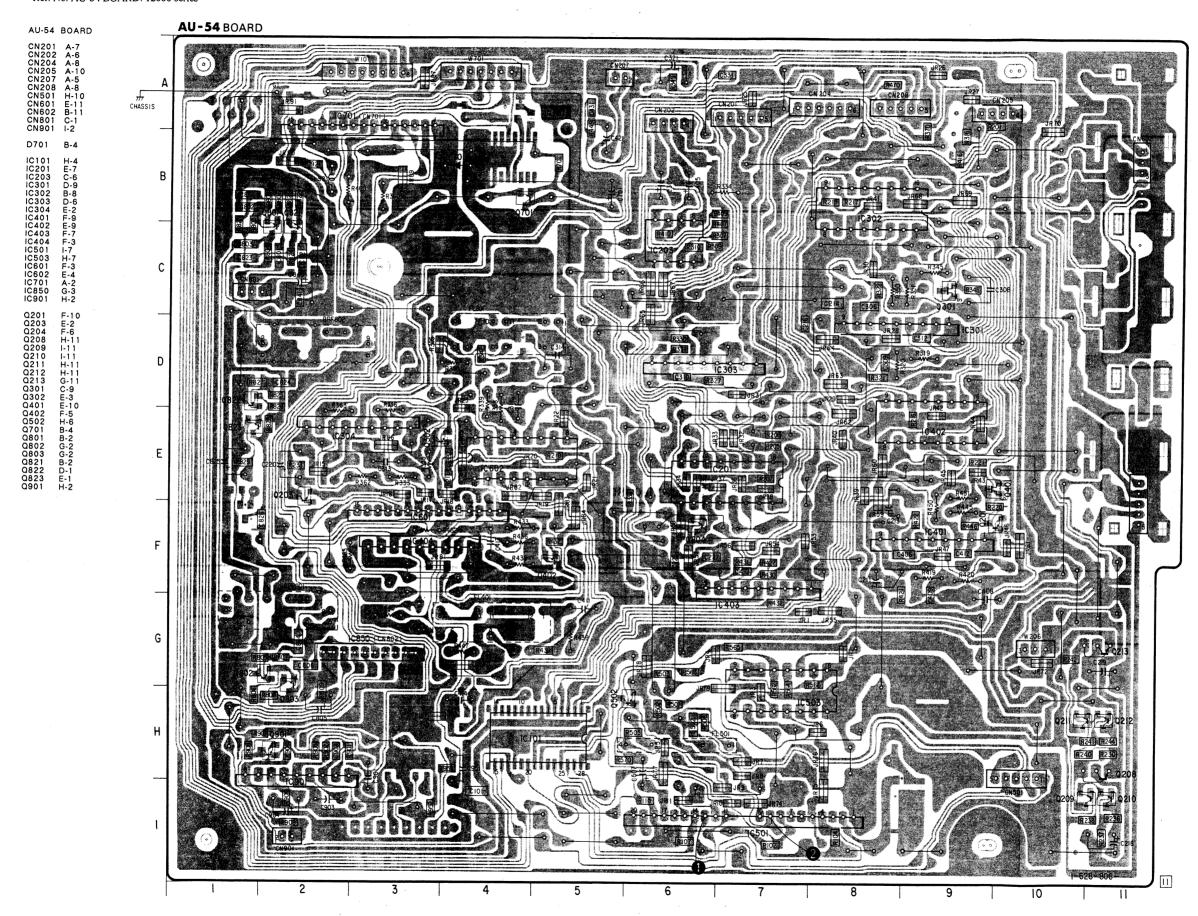


Signal path

| | V | IDEC |) Signal | AUDIO O: |
|-----|--------|------|----------|--------------|
| | CHROMA | Υ | Y/CHROMA | AUDIO Signal |
| REC | | | | - |
| РВ | | | | ⇔ |

AU-54 (AUDIO) PRINTED WIRING BOARDS

- Ref. No. AU-54 BOARD: 12000 series -

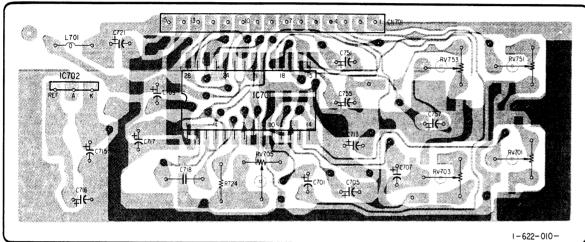




NR-6 (NOISE REDUCTION), MK-2 (MULTI PILOT DETECTION), AD-12 (A-D/D-A CONVERTER), MJ-11 (MIC JACK) PRINTED WIRING BOARDS

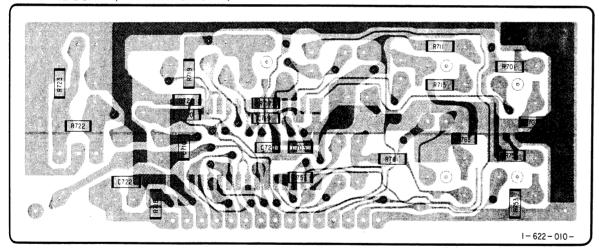
- Ref. No. NR-6, MK-2, AD-12, MJ-11 BOARDS: 6000 series -

IC701
AD -12 BOARD (COMPONENT SIDE)



IC701

AD - 12 BOARD (CONDUCTOR SIDE)



Caution:

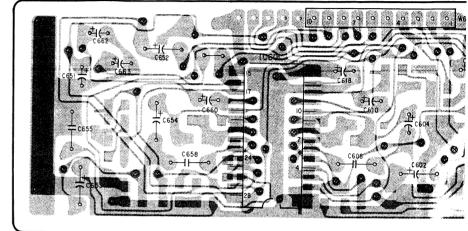
Pattern face side: Parts on the pattern face side seen from

(Conductor Side)

Parts face side: Parts on the parts face side seen from the

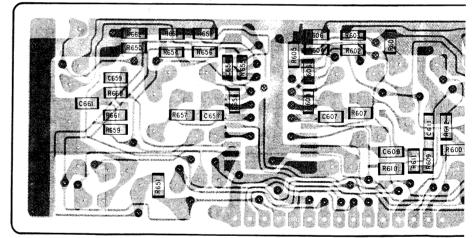
(Component side) parts face are indicated. IC601

NR - 6 BOARD (COMPONENT SIDE)



IC601

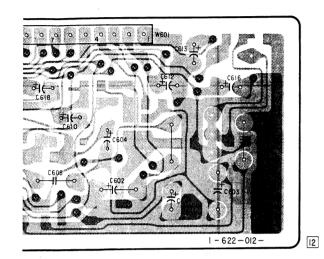
NR-6 BOARD (CONDUCTOR SIDE)

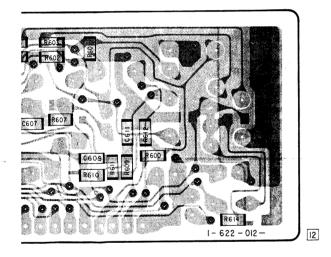


-165 -

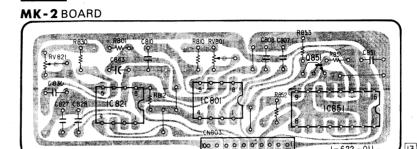
AUDIO

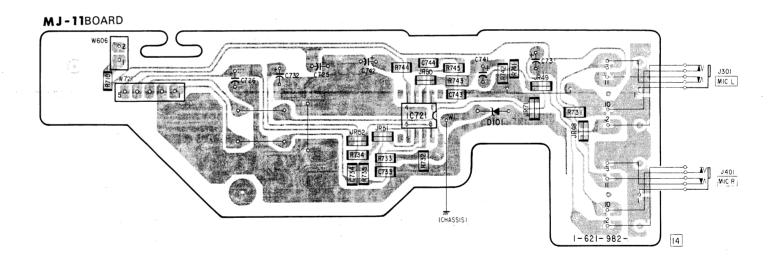
AUDIO

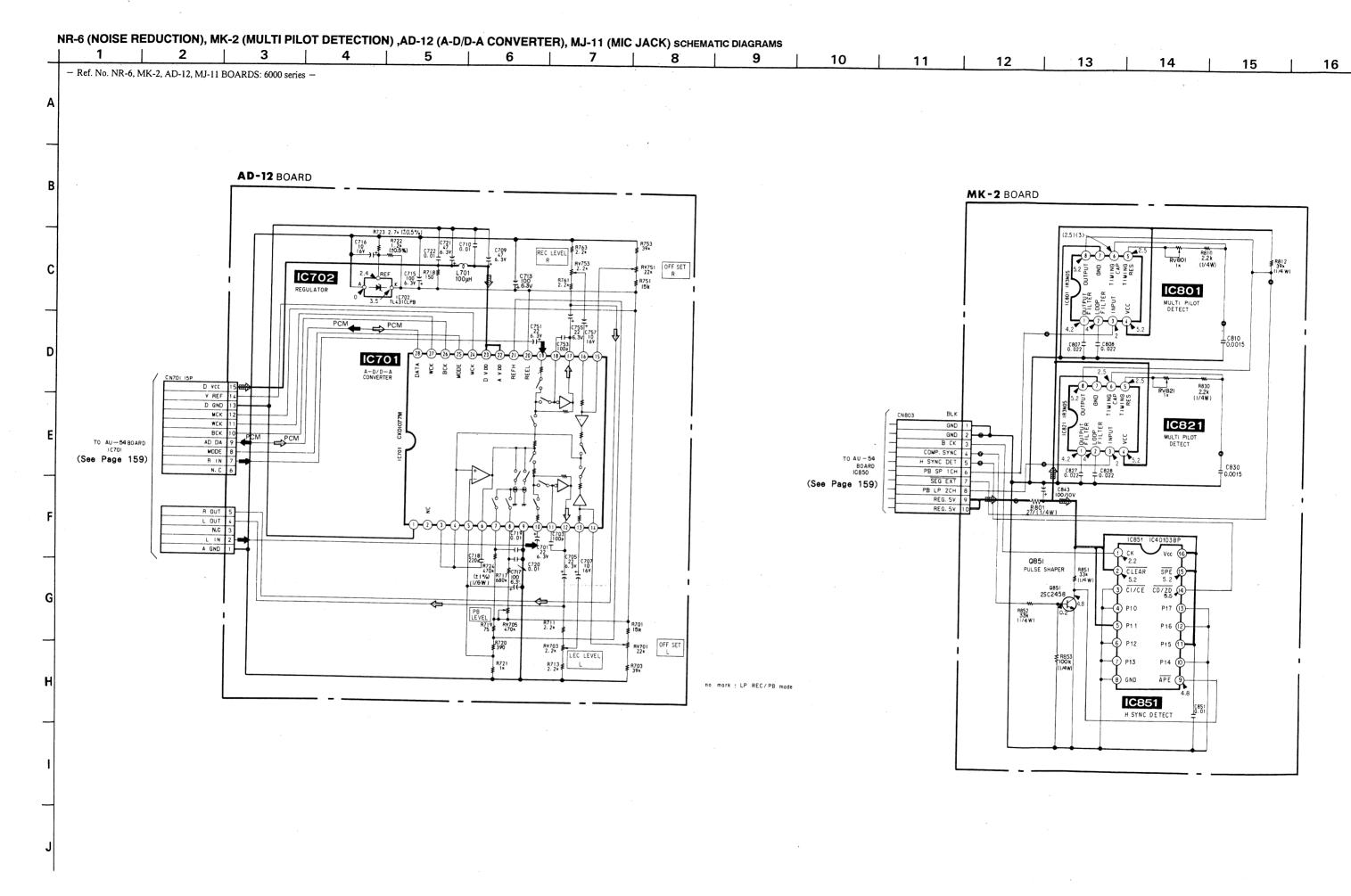




IC850

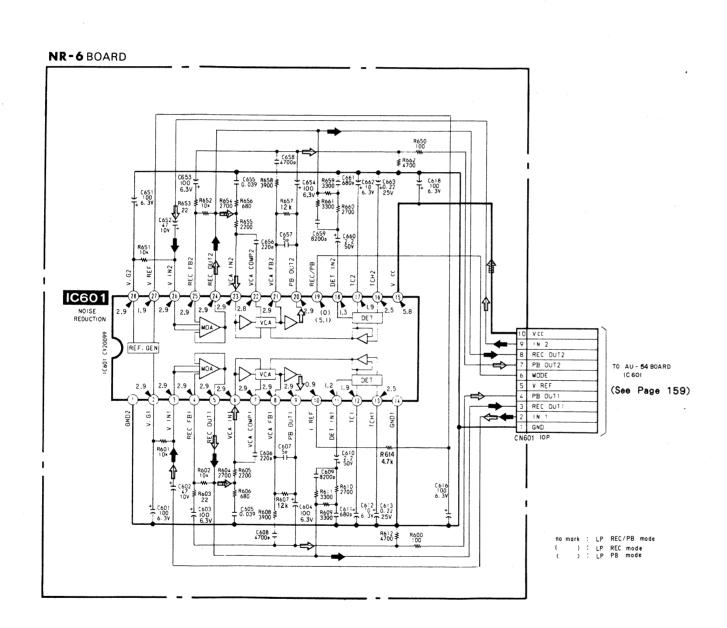


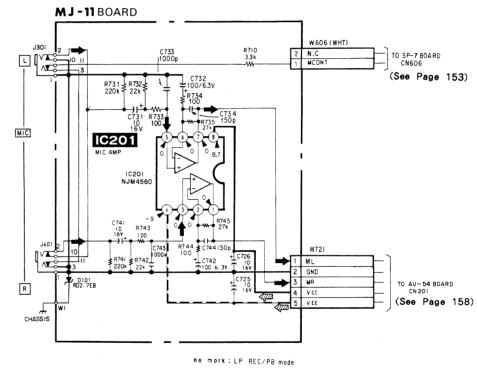




5 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |







Signal path

| | V | IDEO | ALIDIO Cirral | | |
|-----|--------|------|---------------|--------------|--|
| | CHROMA | Υ | Y/CHROMA | AUDIO Signal | |
| REC | | | | → | |
| PB | | | | | |



AF-20 (AFM PROCESS) PRINTED WIRING BOARDS

- Ref. No. AF-20 BOARD: 6000 series -

AF-20 (A

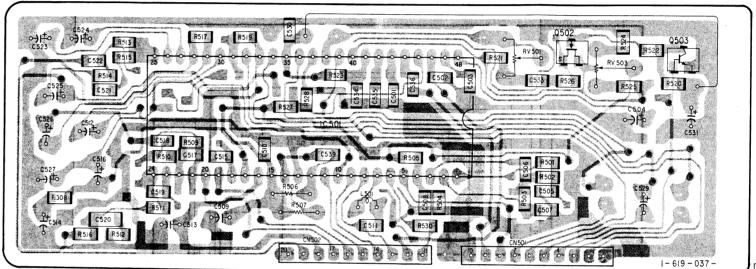
- Ref. No

Signal path

| | V | IDEO | Signal | ALIDIO Dia | | |
|-----|--------|------|----------|--------------|--|--|
| | CHROMA | Υ | Y/CHROMA | AUDIO Signal | | |
| REC | - | | | - | | |
| PB | | | | ₽ | | |

IC501

AF-20 BOARD

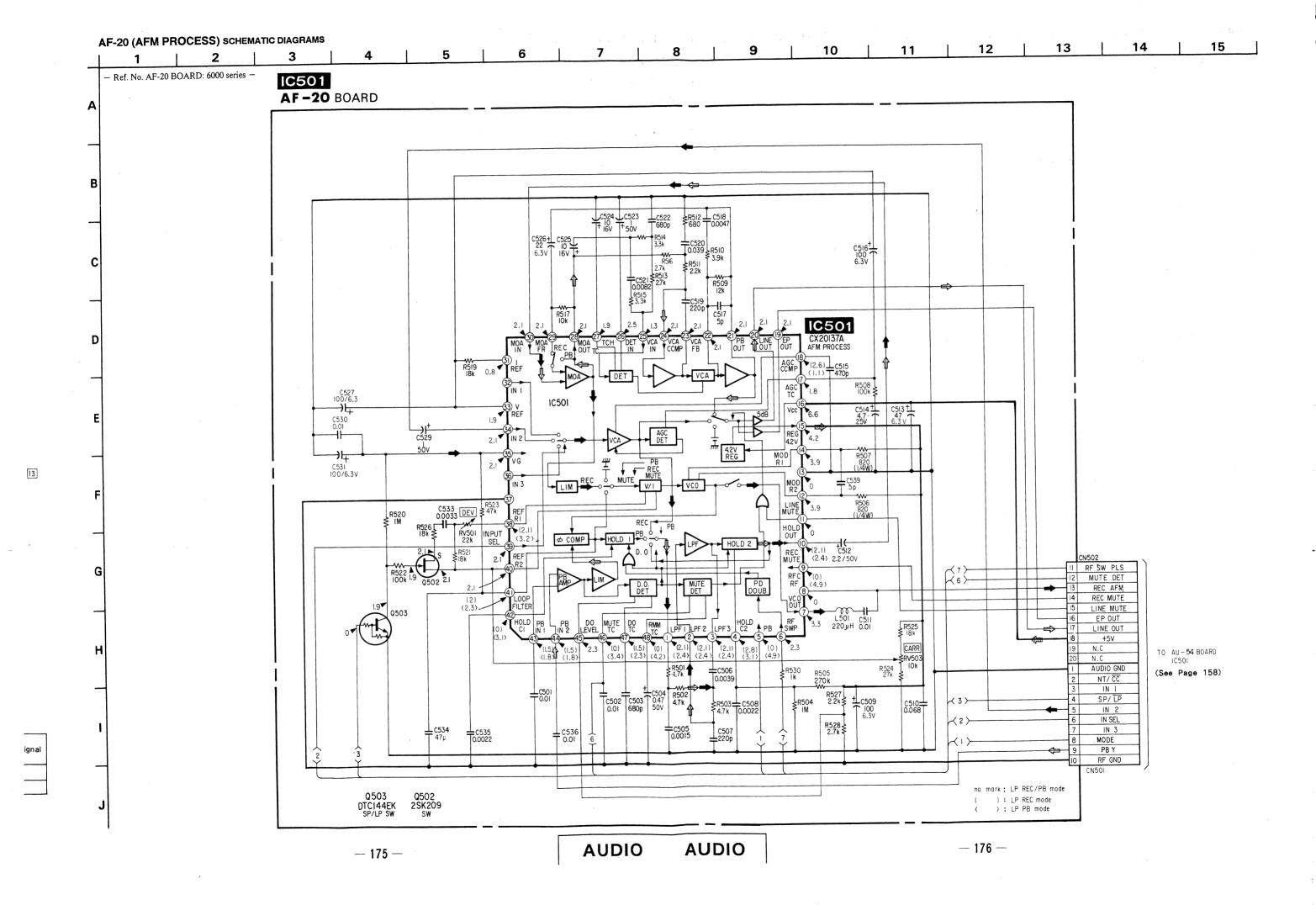


Caution:

Pattern face side: Parts on the pattern face side seen from

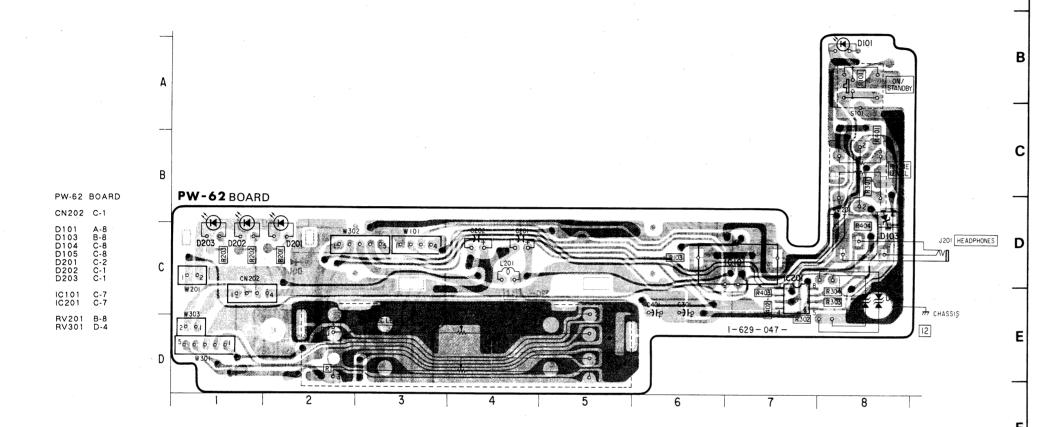
(Conductor Side) Parts on the parts face side seen from the

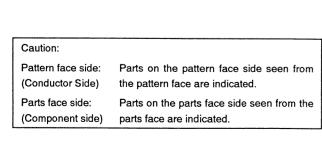
(Component side) parts face are indicated.



PW-62 (LEVEL METER/VOLUME/JACK/REMOTE CONTROL REDEIVER) PRINTED WIRING BOARDS

- Ref. No. PW-62 BOARD: 6000 series -

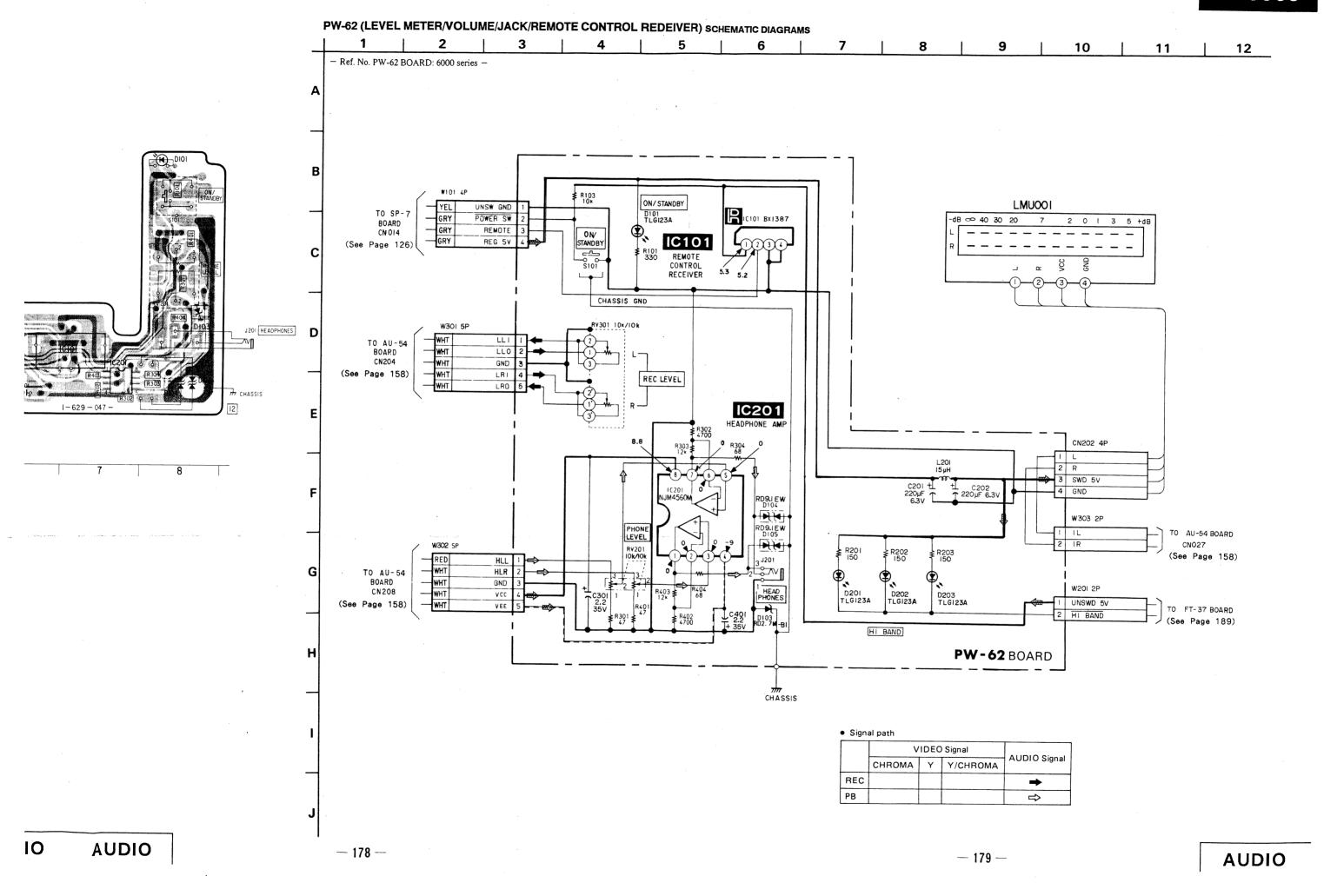




AUDIO AUDIO

3 - Ref. No. PW-62 BOARD: 6000 series -W101 4P R103 ON/STANDBY UNSW GND TO SP-7 DIOI TLGI23A POWER SW BOARD REMOTE ON/ STANDBY CN 014 IC101 REG 5V (See Page 126) RECEIVER CHASSIS GND TO AU-54 BOARD LLO CN204 GND (See Page 158) LRI REC LÈVEL LRO W302 5P HLL HLR TO AU-54 BOARD GND CN208 VCC (See Page 158)

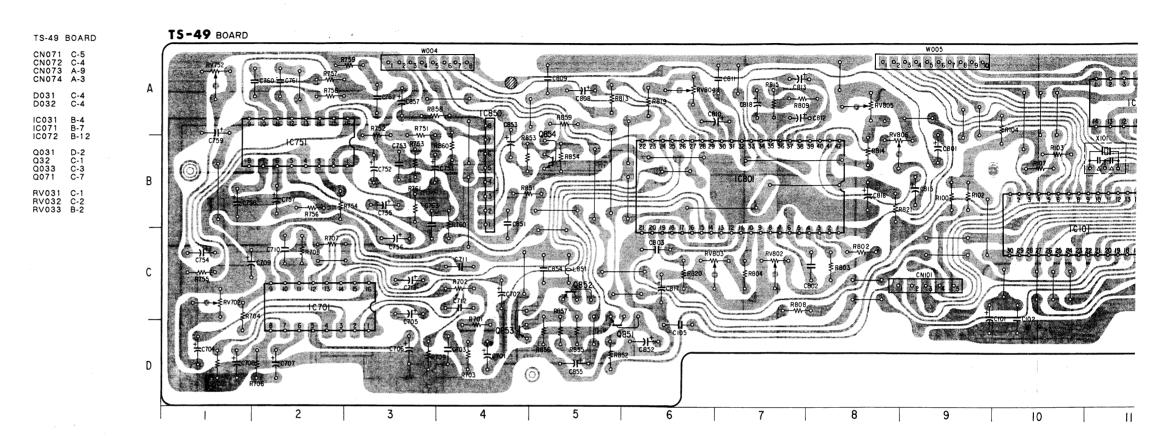
PW-62 (LEVEL METER/VOLUME/JACK/REMOTE CONTROL REDEIVER) SCI

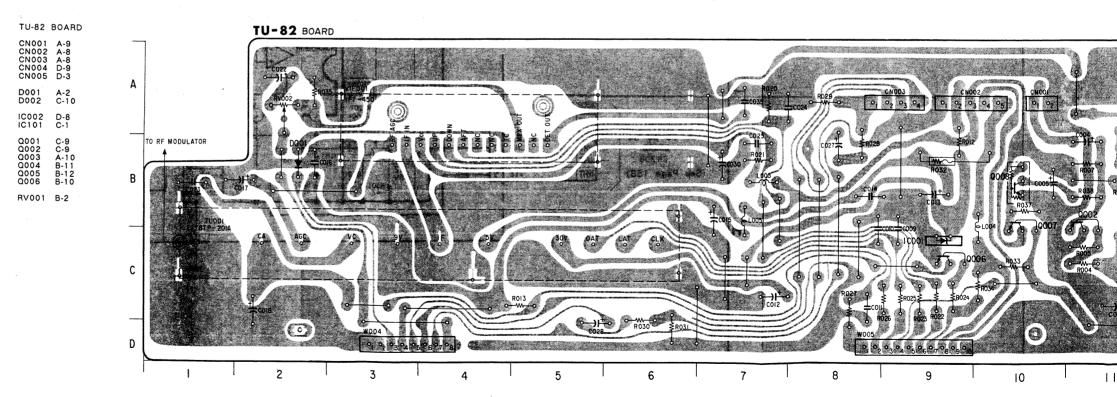


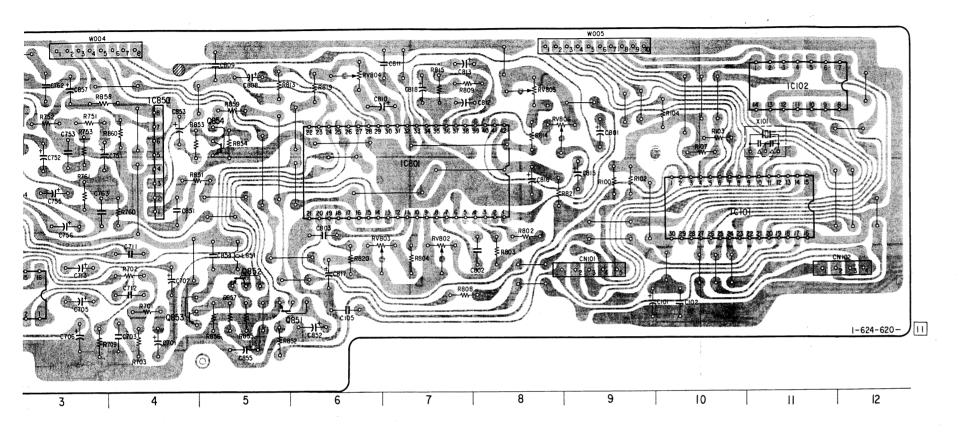


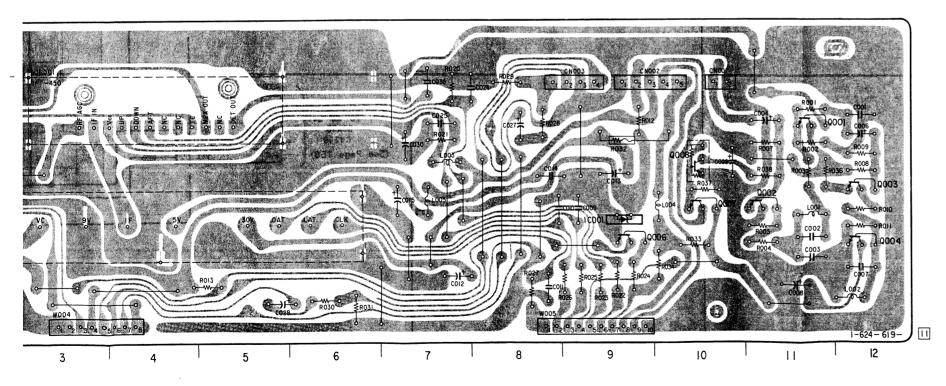
TU-82 (TUNER/VIF/SIF), TS-49 (TUNER CONTROL), PR-12 (TUNER PRESET SWITCH) PRINTED WIRING BOARDS

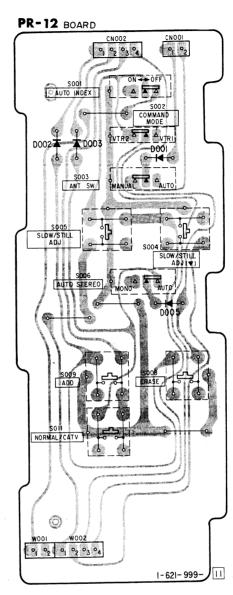
- Ref. No. TU-82, TS-49 BOARDS: 12000 series, PR-12 BOARD: 13000 series -

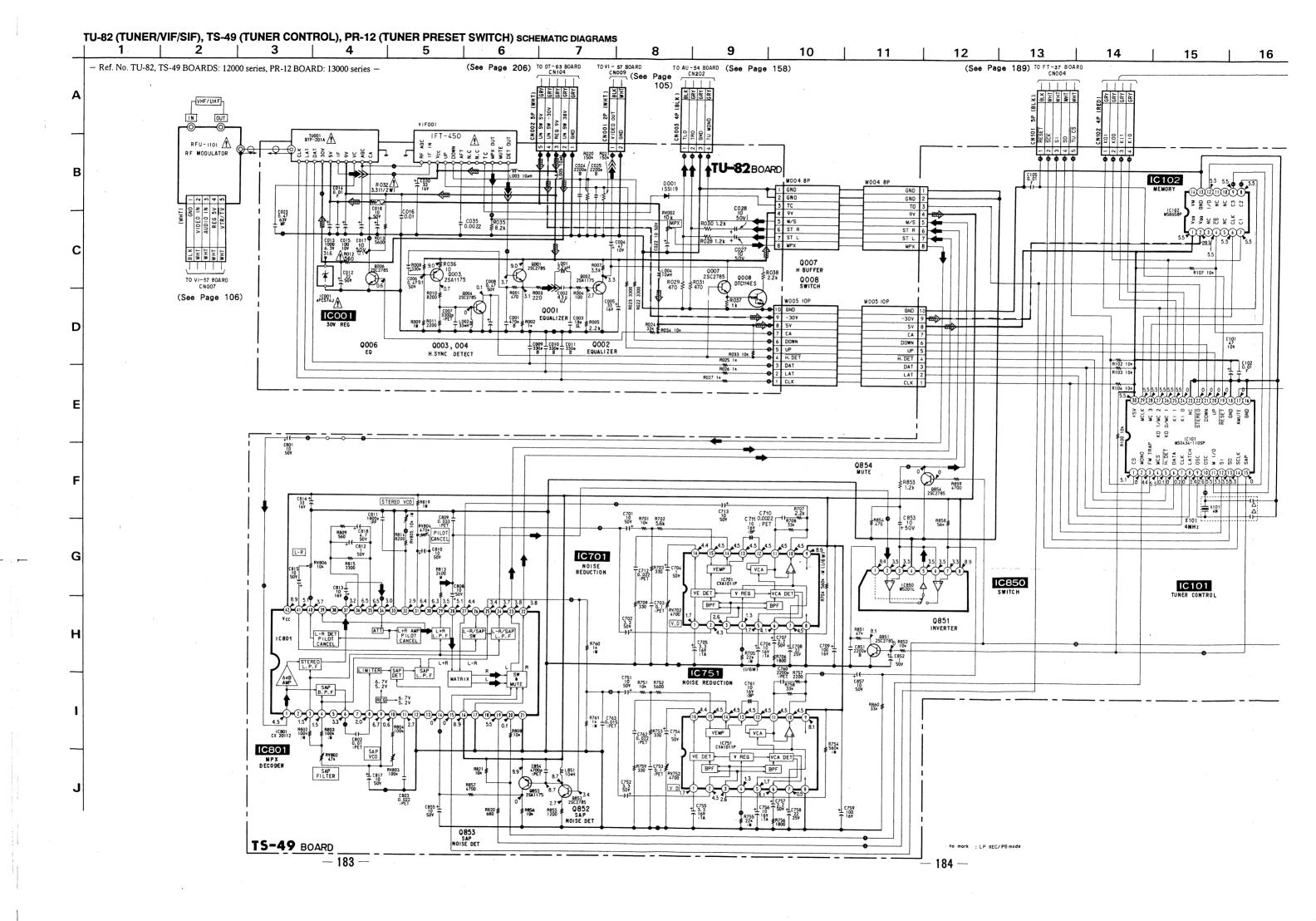


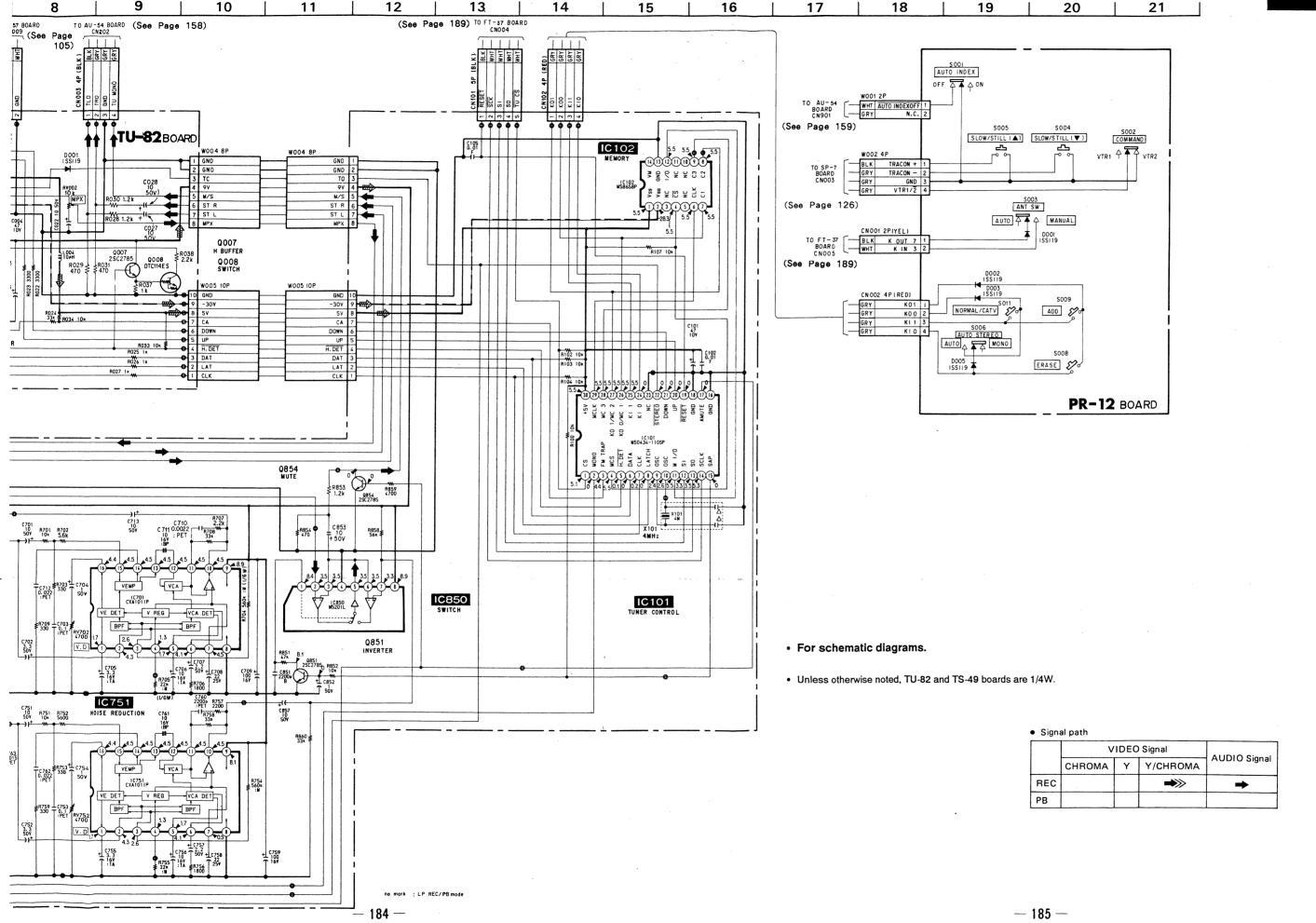






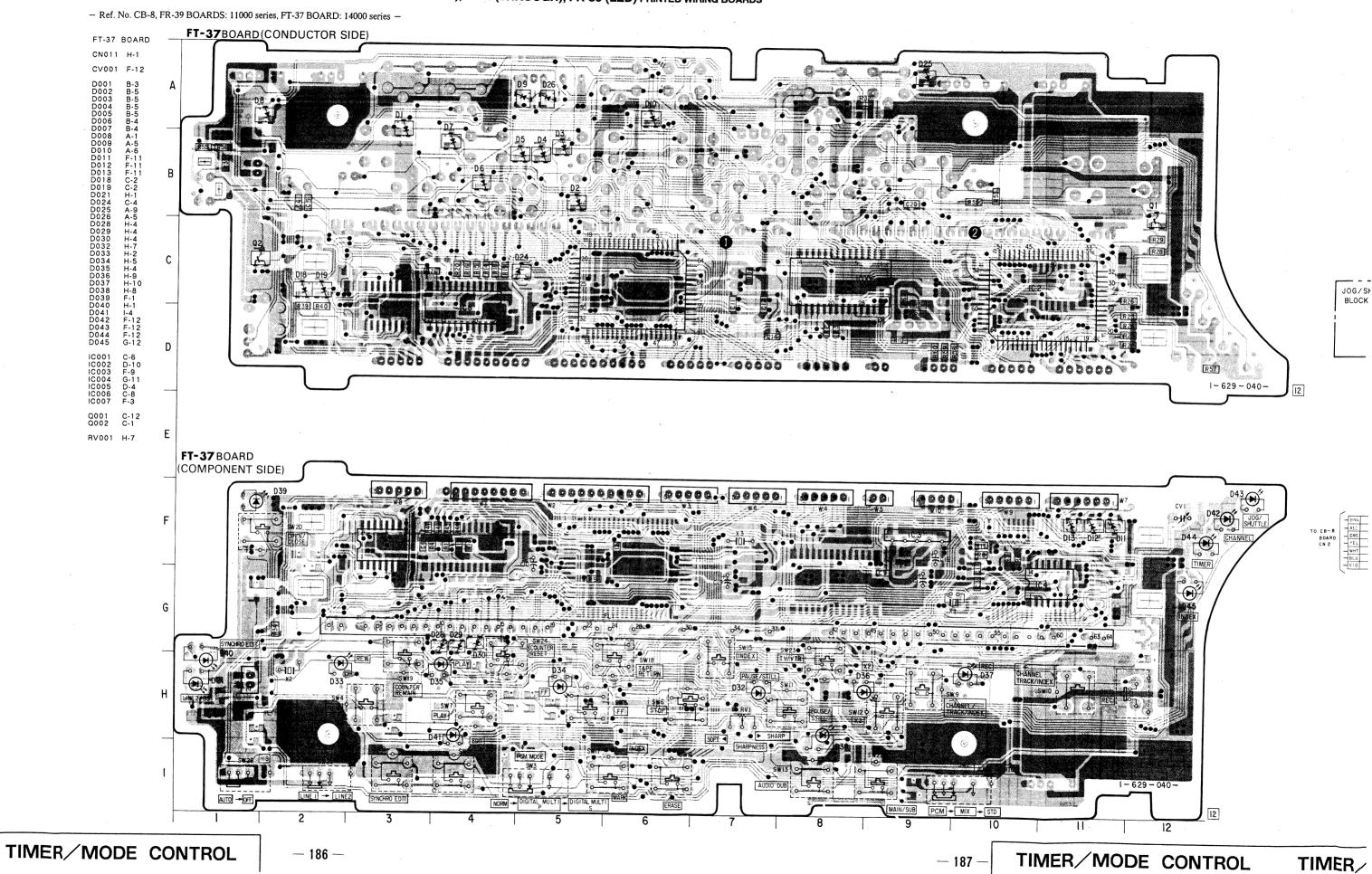


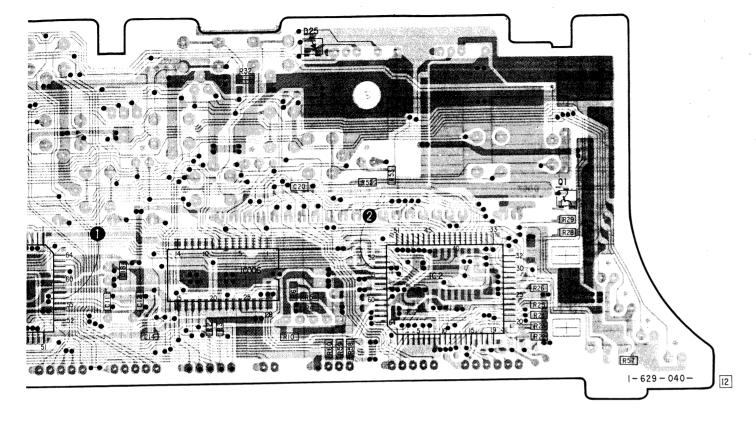


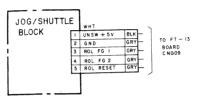


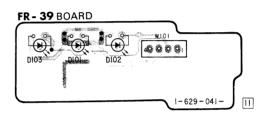
EV-S900

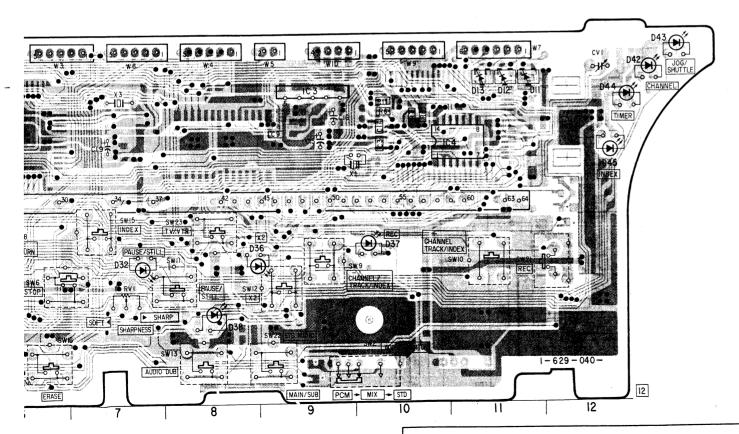
FT-37 (TIMER/MODE CONTROL /JOG SHUTTLE/INDICATOR TUBE), CB-8 (THROUGH), FR-39 (LED) PRINTED WIRING BOARDS

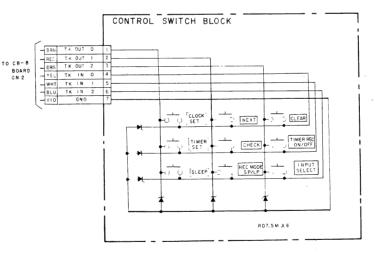


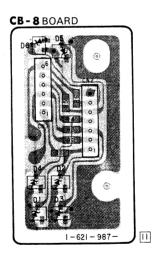












Caution:

Parts on the pattern face side seen from

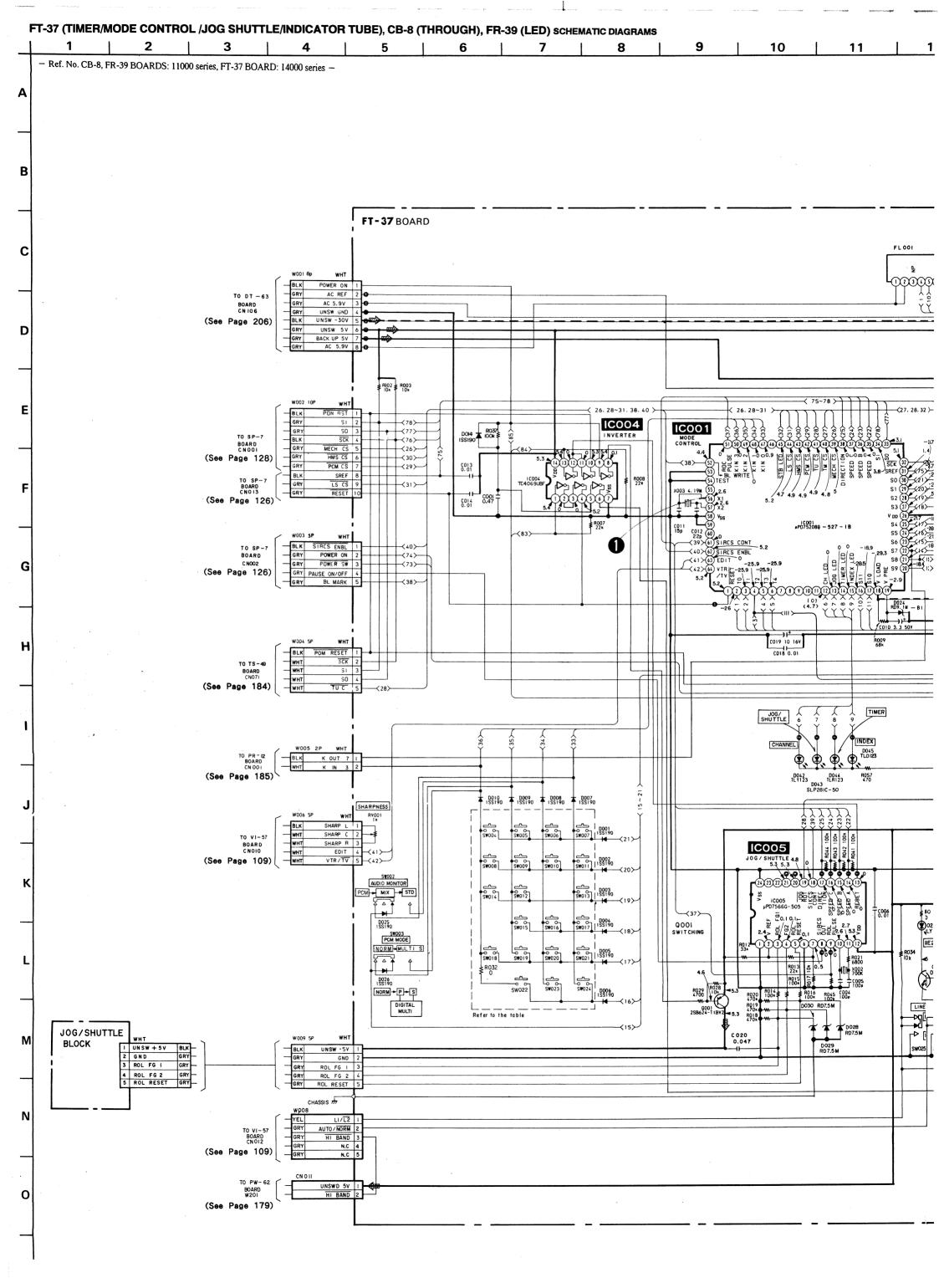
the pattern face are indicated. Parts on the parts face side seen from the Parts face side:

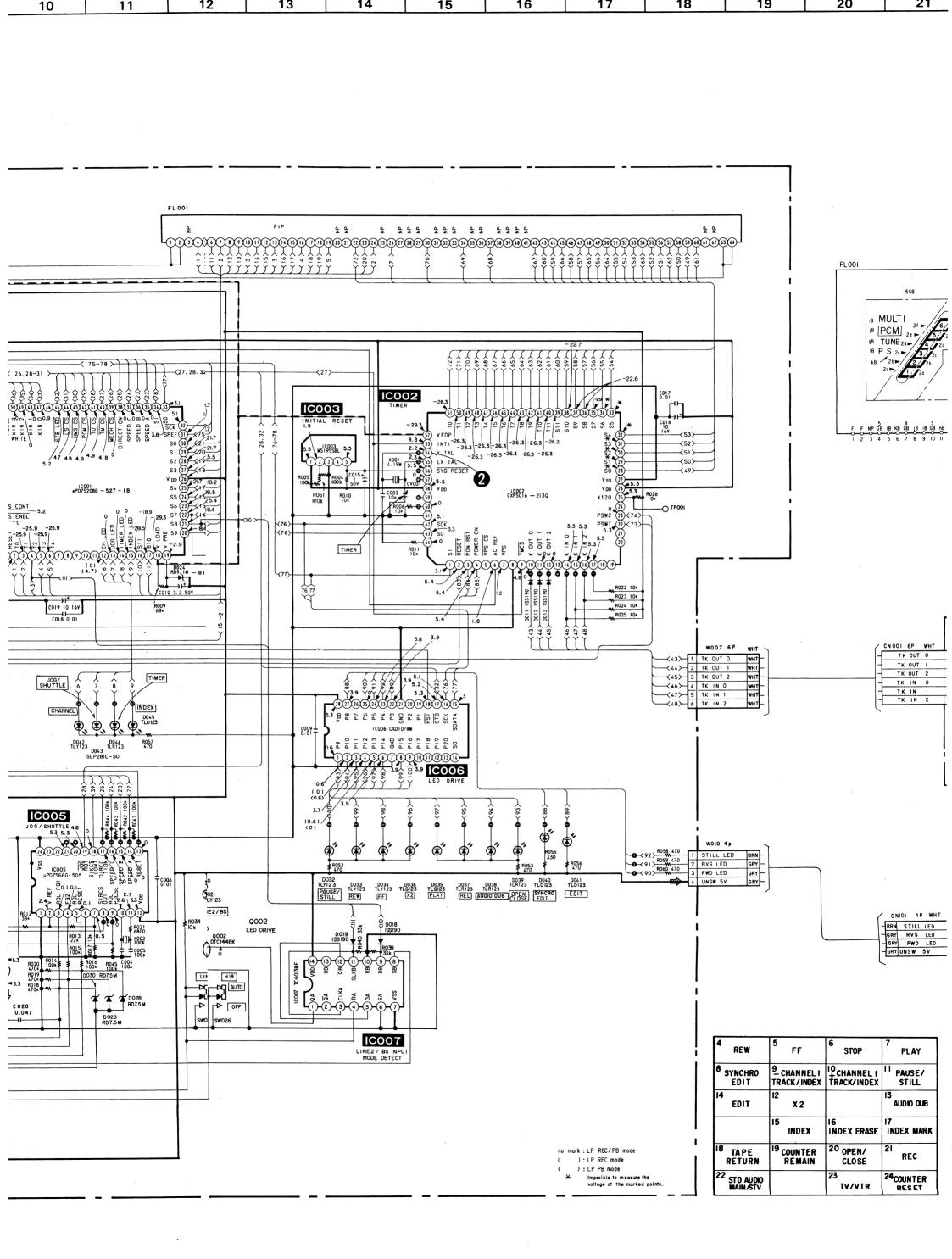
(Component side)

TIMER/MODE CONTROL

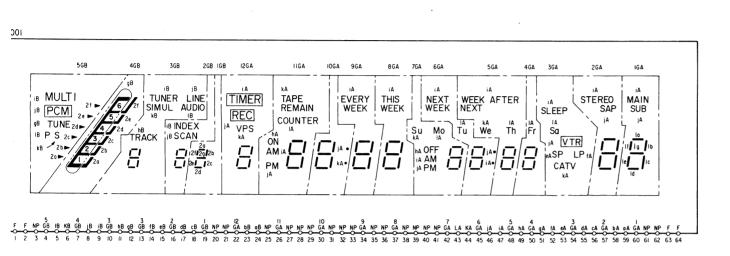
TIMER/MODE CONTROL

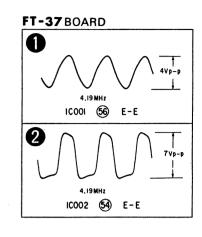
-188 -

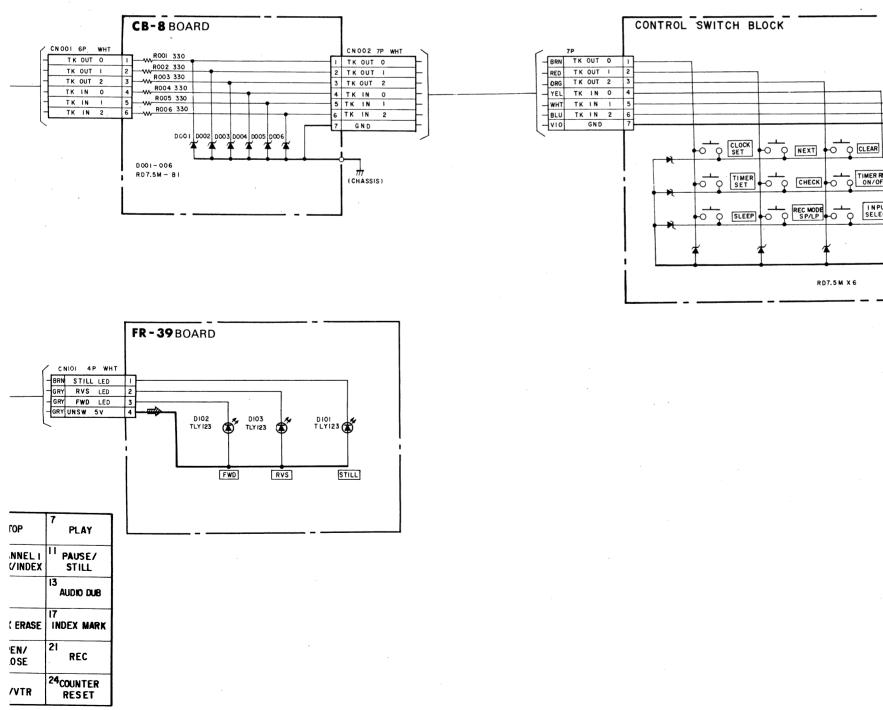




) | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31



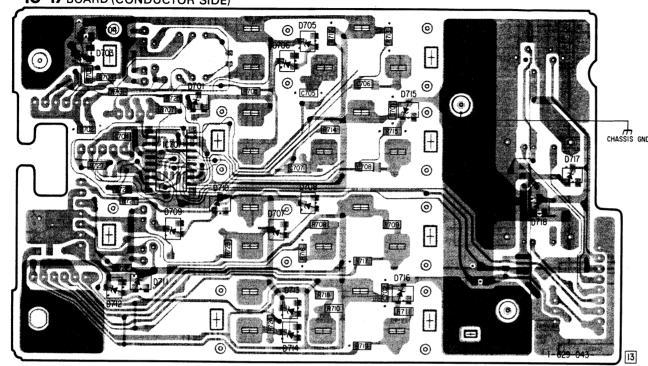




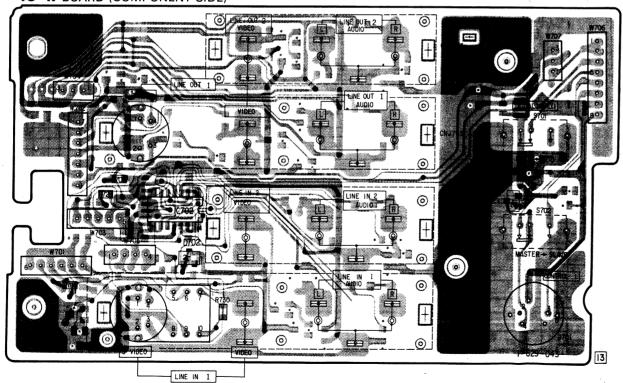
IO-16 (CONTROL S JACK), IO-17 (INPUT/OUTPUT TERMINAL) PRINTED WIRING BOARDS

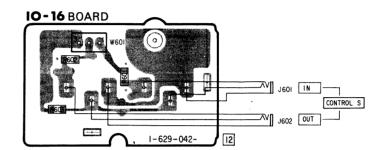
- Ref. No. IO-16, IO-17 BOARDS: 7000 series -

IO-17 BOARD (CONDUCTOR SIDE)



IO-17 BOARD (COMPONENT SIDE)





Caution:

— 198 —

Pattern face side: (Conductor Side) Parts on the pattern face side seen from the pattern face are indicated.

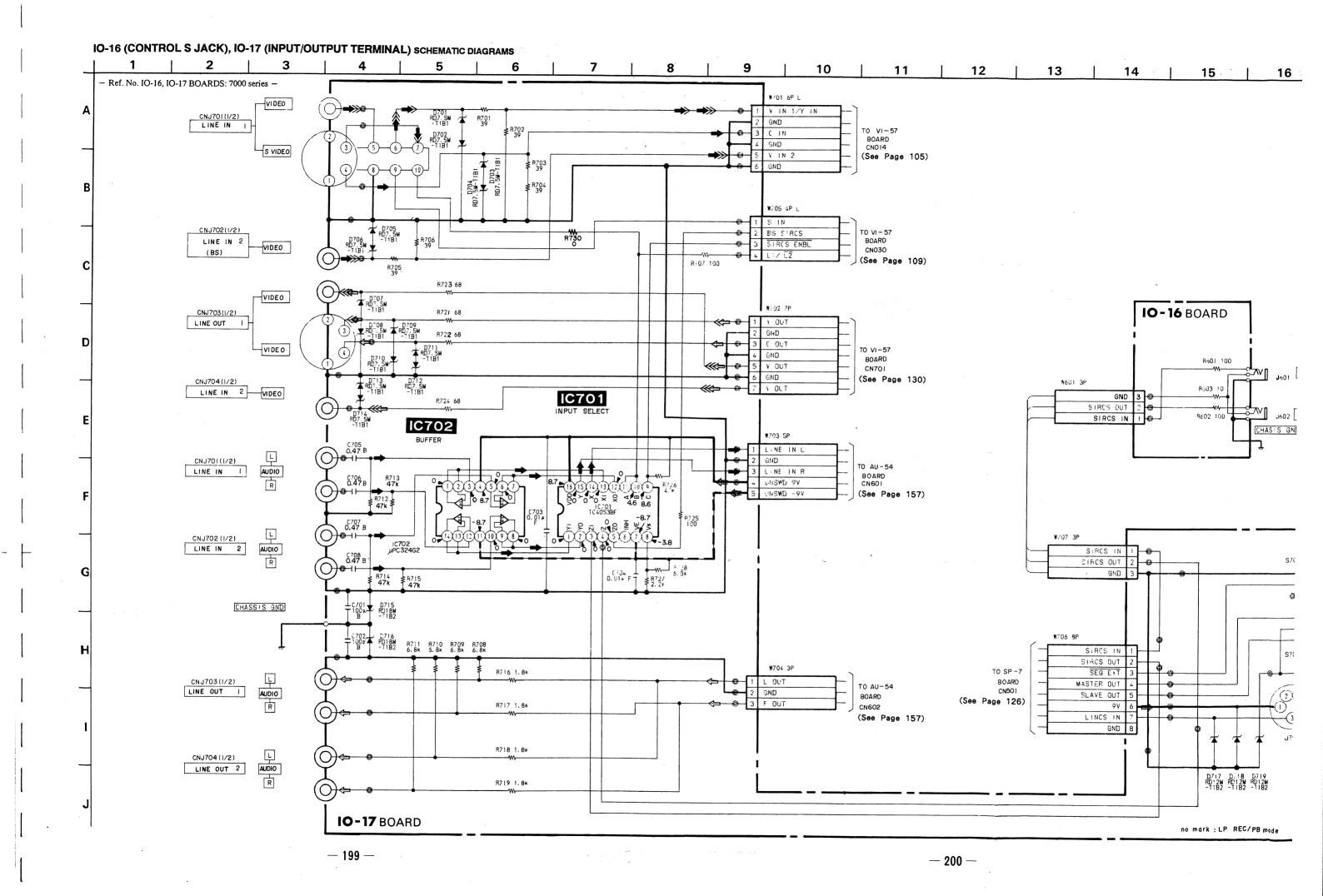
Parts face side:

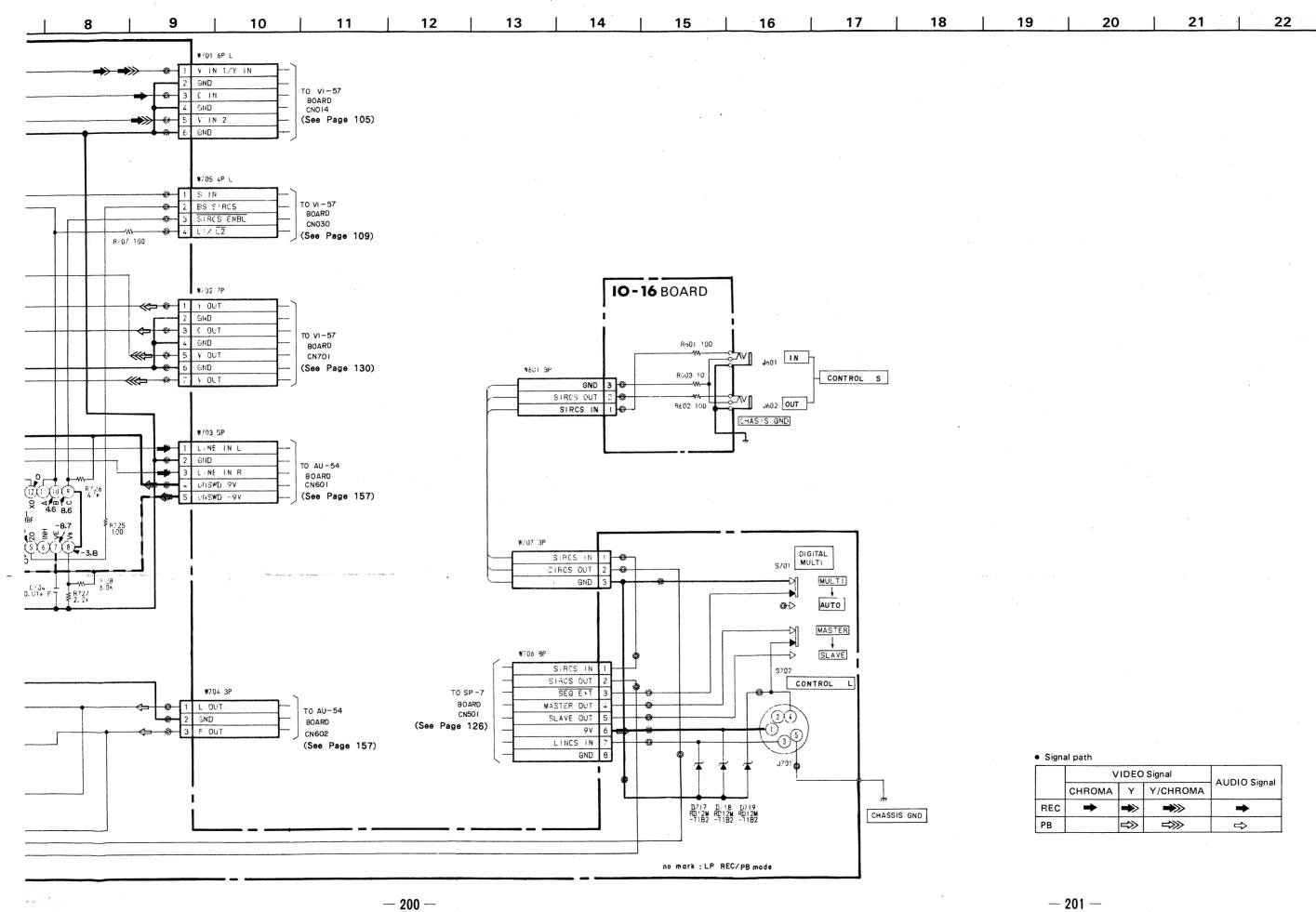
Parts on the parts face side seen from the

(Component side)

parts face are indicated.

IN/OUT

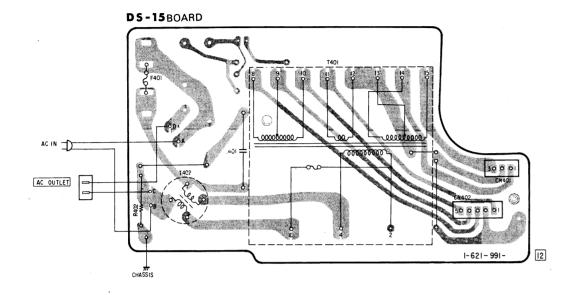


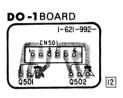


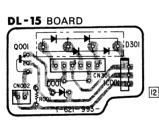


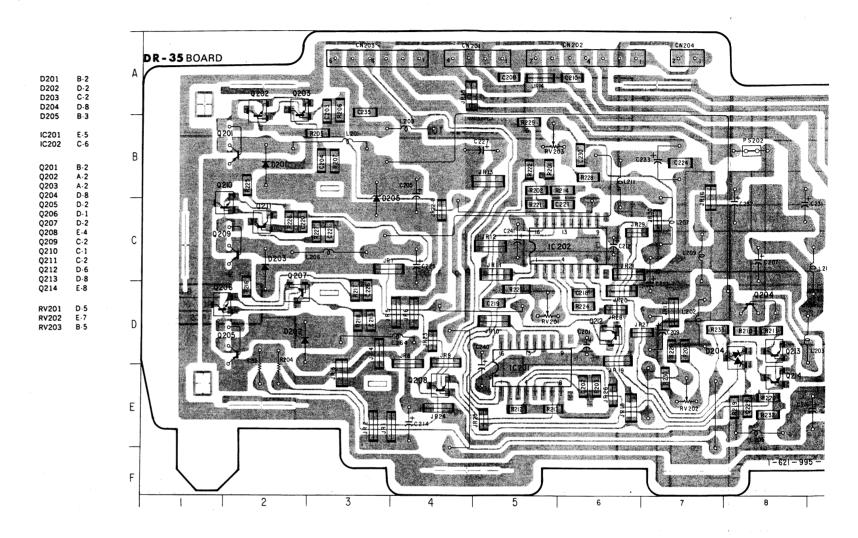
DR-35 (SWITCHING REGULATOR), DO-1 (REGULATOR), DT-63 (REGULATOR), DL-15 (RECT), DS-15 (LET) PRINTED WIRING BOARDS

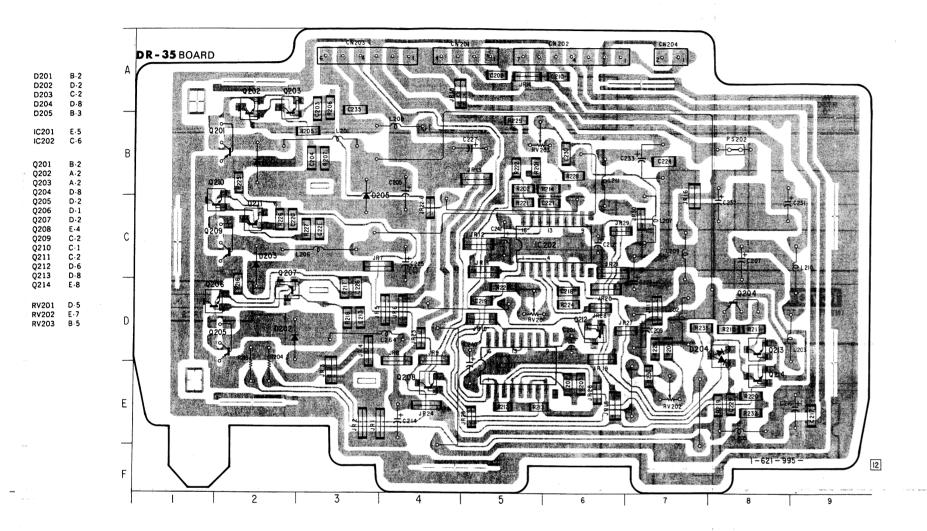
- Ref. No. DR-35, DO-1, DT-63, DS-15, DL-15 BOARDS: 13000 series -

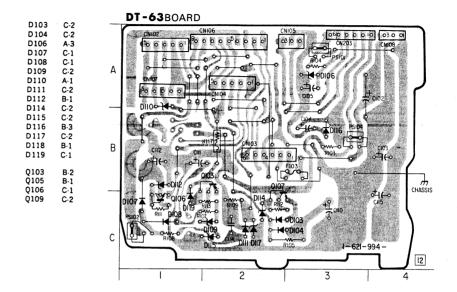


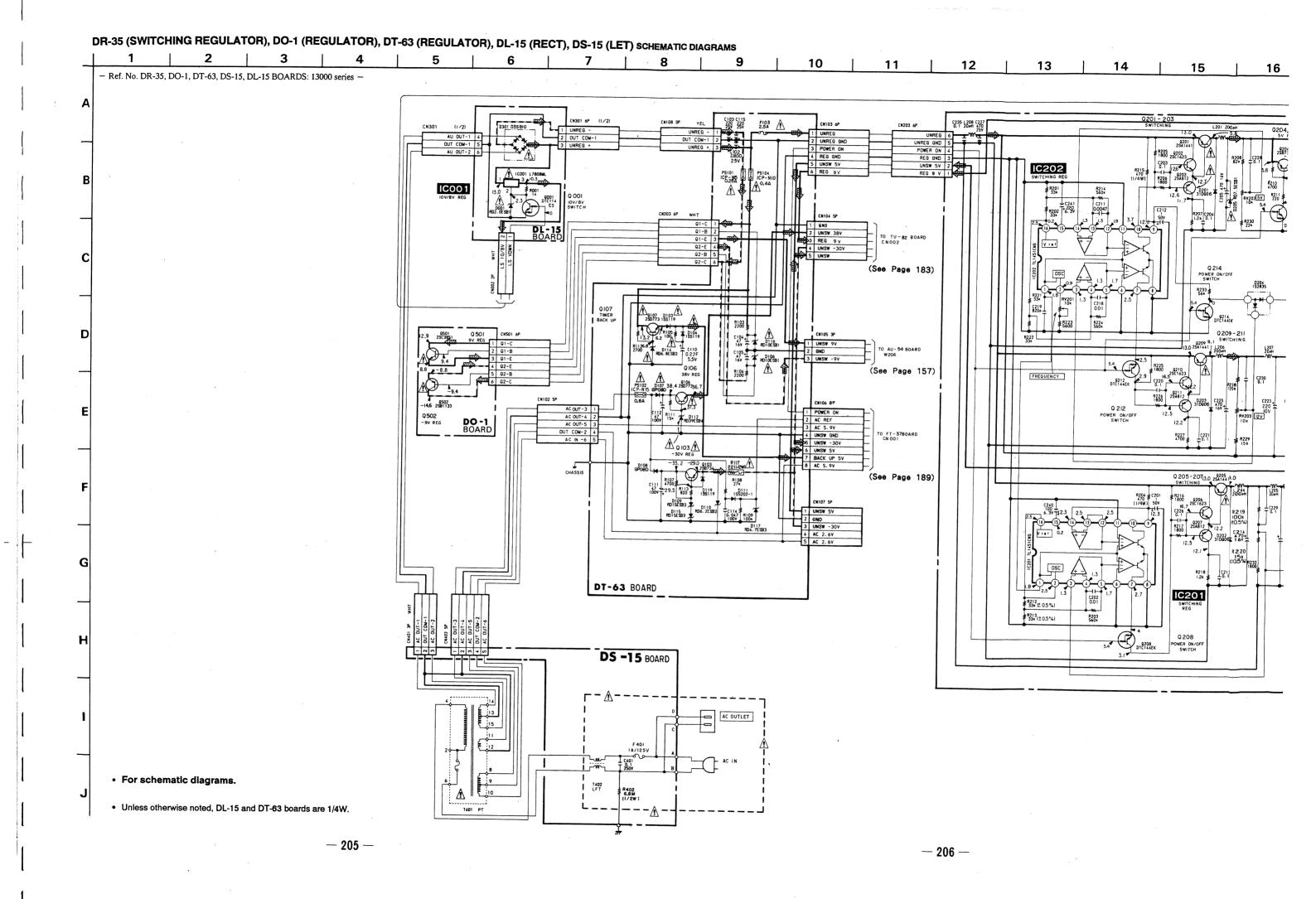


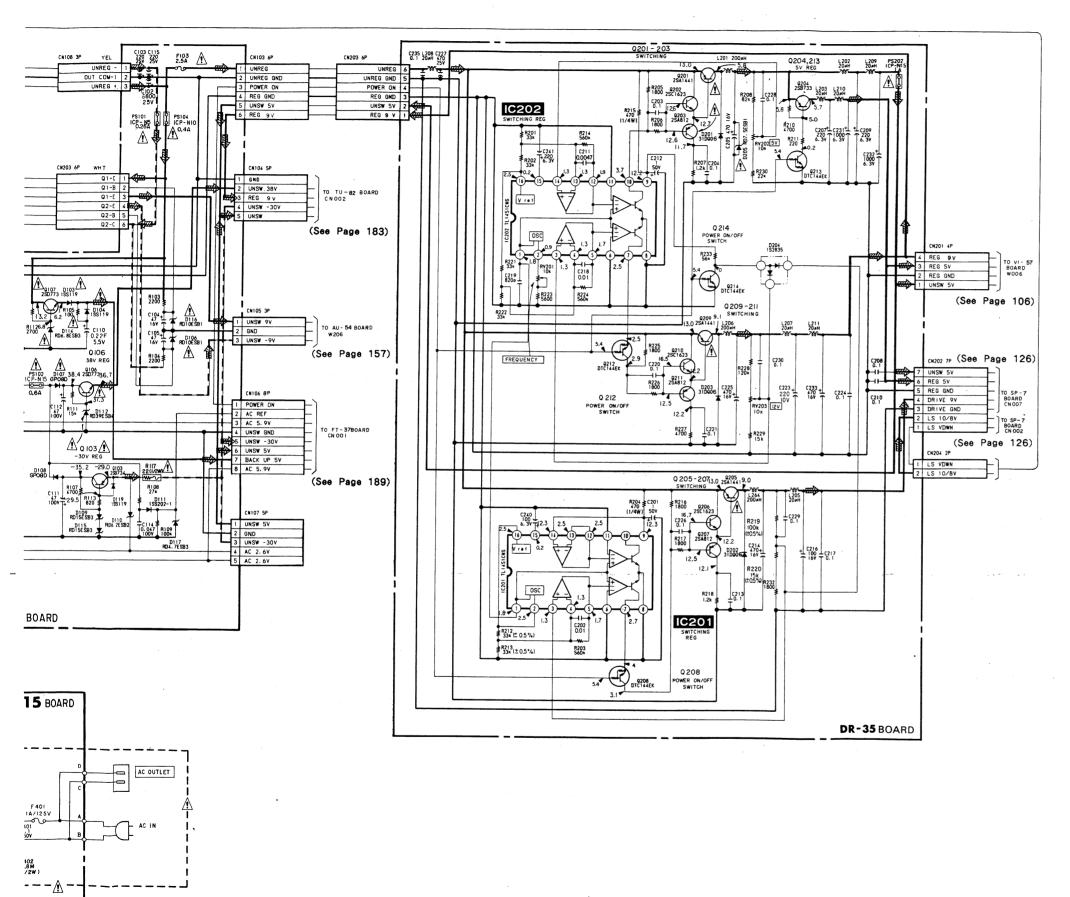












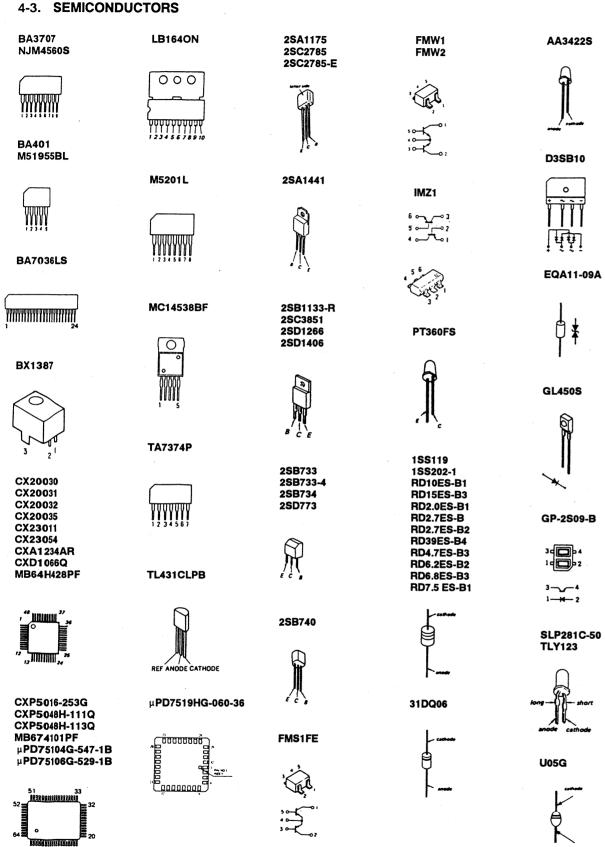
TOP VIEW

51 A.1-4 52 *1-6 53 A.3-7 54 *A-7 55 3-6

56 *A-7 57 *1-6 58 *3-7 59 *1-6 60 \(\Lambda \).1-5

61 <u>A.1-5</u> 62 3-6 63 *3-7 64 *3-7 65 3-7

4-3. SEMICONDUCTORS



SECTION 5 EXPLODED VIEWS

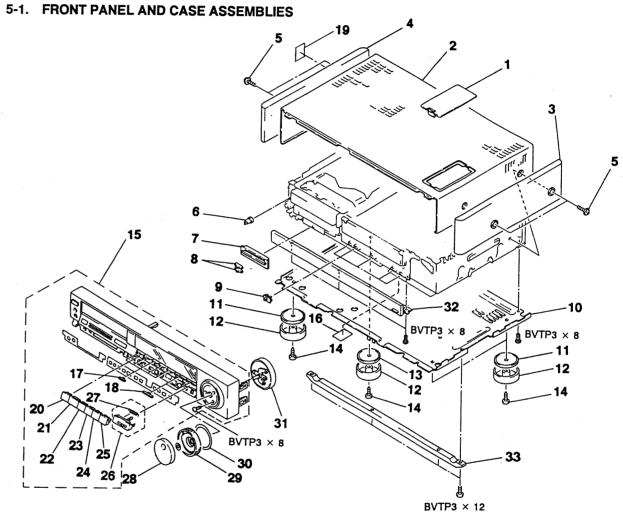
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

The components identified by mark A or dotted line with mark A are critical for safety.

Replace only with part number

Les composants identifiés par une marque A sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifé.



| Part No. | <u>Description</u> <u>Rem</u> | nark 1 | No. | Part No. | Description | Remark |
|--|--|--|---|--|---|--|
| 3-716-941-11 X-3713-417-1 X-3713-418-1 | CASE, UPPER WOOD (RIGHT) ASSY, SIDE WOOD (LEFT) ASSY, SIDE | | 18 19 20 21 22 | *3-703-848-01 X-3713-409-1 X-3713-407-1 | LABEL (N), SUB CAUTION KEY (2) ASSY, REW KEY (2) ASSY, FWD | |
| X-3711-980-1 3-716-868-01 3-716-882-01 | COVER ASSY, SLIDE KEY, SLIDE KNOB, SLIDE | - | 23 24 25 26 27 | 3-716-856-11 X-3713-412-1 X-3713-410-1 X-3713-413-3 | KEY, STOP KEY (2) ASSY, PAUSE KEY (2) ASSY, X2 KEY (2) ASSY, RFC | 27 |
| X-3713-423-1 3-722-148-01 3-721-343-11 | FOOT ASSY (G) SPACER (B), FOOT SCREW (M4X10), FIXED | -27 | 28 29 30 31 32 | 3-721-202-21 3-716-831-01 1-464-784-11 | RING, SHUTTLE SPACER ENCODER, ROTARY | · |
| *3-703-845-01 3-722-133-01 | LABEL (N) (U/C), MAIN CAUTION CAP, COUNTER BUTTON | | 33 | | | |
| | 3-722-146-01 3-716-941-11 X-3713-418-1 3-721-342-11 3-716-867-11 X-3711-980-1 3-716-882-01 *3-716-913-21 3-722-147-01 X-3713-423-1 3-722-148-01 3-721-343-11 X-3713-428-1 *3-703-845-01 | 3-722-146-01 LID, PRESET 3-716-941-11 CASE, UPPER X-3713-417-1 WOOD (RIGHT) ASSY, SIDE X-3713-418-1 WOOD (LEFT) ASSY, SIDE 3-721-342-11 SCREW, SIDE WOOD 3-716-867-11 KNOB, HP X-3711-980-1 COVER ASSY, SLIDE 3-716-868-01 KEY, SLIDE 3-716-882-01 KNOB, SLIDE *3-716-913-21 PLATE, BOTTOM 3-722-147-01 SPACER (A), FOOT X-3713-423-1 FOOT ASSY (G) 3-722-148-01 SPACER (B), FOOT 3-721-343-11 SCREW (M4X10), FIXED X-3713-428-1 PANEL ASSY, FRONT 17, 18, 20 *3-703-845-01 LABEL (N) (U/C), MAIN CAUTION | 3-722-146-01 LID, PRESET 3-716-941-11 CASE, UPPER X-3713-417-1 WOOD (RIGHT) ASSY, SIDE X-3713-418-1 WOOD (LEFT) ASSY, SIDE 3-721-342-11 SCREW, SIDE WOOD 3-716-867-11 KNOB, HP X-3711-980-1 COVER ASSY, SLIDE 3-716-868-01 KEY, SLIDE 3-716-882-01 KNOB, SLIDE *3-716-913-21 PLATE, BOTTOM 3-722-147-01 SPACER (A), FOOT X-3713-423-1 FOOT ASSY (G) 3-722-148-01 SPACER (B), FOOT 3-721-343-11 SCREW (M4X10), FIXED X-3713-428-1 PANEL ASSY, FRONT 17, 18, 20-27 *3-703-845-01 LABEL (N) (U/C), MAIN CAUTION | 3-722-146-01 LID, PRESET 3-716-941-11 CASE, UPPER X-3713-417-1 WOOD (RIGHT) ASSY, SIDE X-3713-418-1 WOOD (LEFT) ASSY, SIDE 3-721-342-11 SCREW, SIDE WOOD 3-716-867-11 KNOB, HP X-3711-980-1 COVER ASSY, SLIDE 3-716-868-01 KEY, SLIDE 3-716-882-01 KNOB, SLIDE 3-716-913-21 PLATE, BOTTOM 3-722-147-01 SPACER (A), FOOT X-3713-423-1 FOOT ASSY (G) 3-722-148-01 SPACER (B), FOOT X-3713-428-1 PANEL ASSY, FRONT 3-703-845-01 LABEL (N) (U/C), MAIN CAUTION 33 3-703-845-01 LABEL (N) (U/C), MAIN CAUTION 3-73-703-845-01 LABEL (N) (U/C), MAIN CAUTION 3-73-713-425-1 PANEL ASSY, FRONT 3-73-733-845-01 LABEL (N) (U/C), MAIN CAUTION 3-73-73-73-73-73-71-71 RASSET CASES (A) RASSET CASES (A) RASSET CASES (B) RASSET CASES | 3-722-146-01 LID, PRESET 3-716-941-11 CASE, UPPER X-3713-417-1 WOOD (RIGHT) ASSY, SIDE X-3713-418-1 WOOD (LEFT) ASSY, SIDE 3-716-867-11 KNOB, HP X-3711-980-1 COVER ASSY, SLIDE 3-716-868-01 KEY, SLIDE 3-716-868-01 KEY, SLIDE 3-716-868-01 KNOB, SLIDE 3-716-868-01 KNOB, SLIDE 3-716-913-21 PLATE, BOTTOM 3-722-147-01 SPACER (A), FOOT X-3713-423-1 FOOT ASSY (G) 3-722-148-01 SPACER (B), FOOT 3-721-343-11 SCREW (M4X10), FIXED X-3713-428-1 PANEL ASSY, FRONT 17, 18, 20-27 *3-703-845-01 LABEL (N) (U/C), MAIN CAUTION 3-722-162-01 3-722-162-01 3-722-162-01 3-722-163-01 3-722-163-01 3-722-163-01 3-722-163-01 3-722-163-01 3-722-163-01 | 3-722-146-01 LID, PRESET 3-716-941-11 CASE, UPPER X-3713-417-1 WOOD (RIGHT) ASSY, SIDE X-3713-418-1 WOOD (LEFT) ASSY, SIDE 3-722-342-11 SCREW, SIDE WOOD 3-721-342-11 KNOB, HP X-3711-980-1 COVER ASSY, SLIDE 3-716-868-01 KEY, SLIDE 3-716-868-01 KEY, SLIDE 3-716-868-01 KEY, SLIDE 3-716-913-21 PLATE, BOTTOM 3-722-147-01 SPACER (A), FOOT X-3713-423-1 FOOT ASSY (G) 3-722-148-01 SPACER (B), FOOT 3-721-343-11 SCREW (M4X10), FIXED X-3713-428-1 PANEL ASSY, FRONT 17, 18, 20-27 *3-703-845-01 LABEL (N) (U/C), MAIN CAUTION 3-722-162-01 STAY POLYON *3-703-845-01 LABEL (N) (U/C), MAIN CAUTION 3-722-162-01 STAY POLYON 3-722-162-01 STAY POLYON |

SECTION 5 EXPLODED VIEWS

-XX, -X mean standardized parts, so :hey may have some differences from the original one.

The construction parts of an assembled part are indicated with a collation number in the remark column.

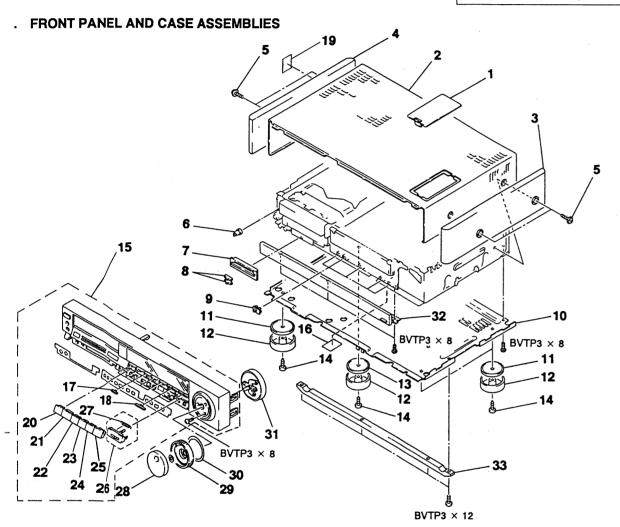
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not

The components identified by mark A or dotted line with mark
A are critical for safety.

Replace only with part number

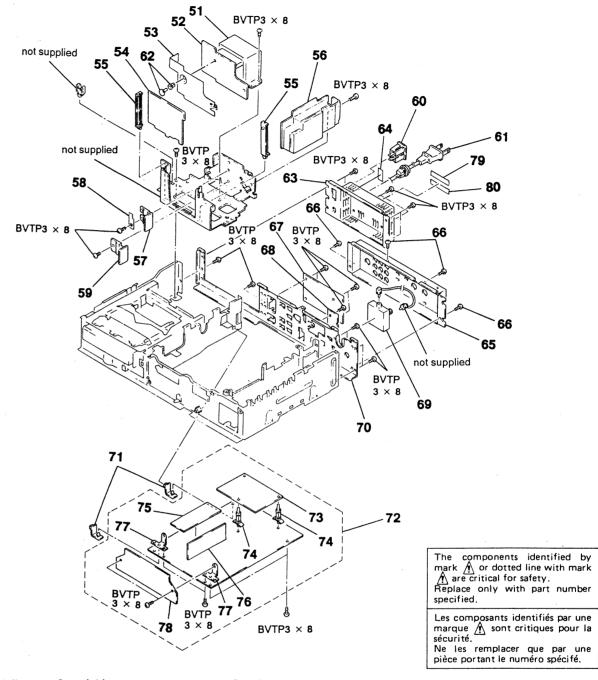
Les composants identifiés par une marque 🚹 sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifé.



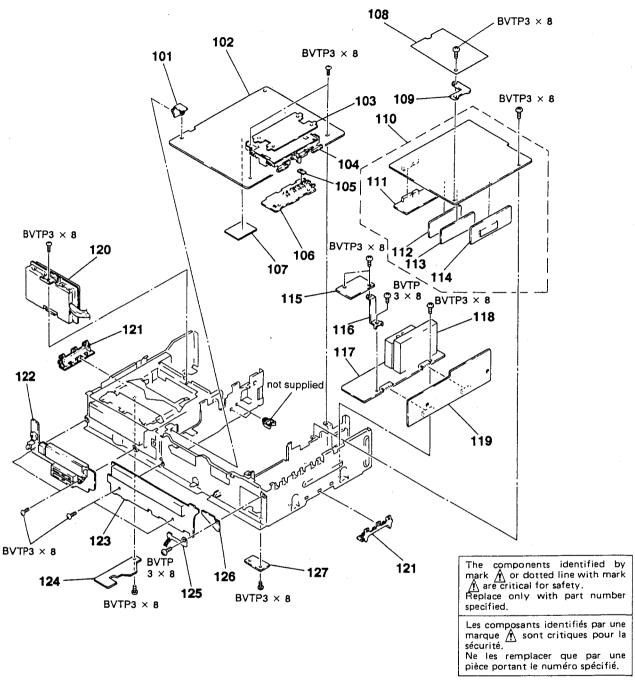
| Part No. | Description | Remark | No. | Part No. | Description | Remark |
|---|---|---------|----------------------------|---|--|--------|
| 3-722-146-01 3-716-941-11 X-3713-417-1 X-3713-418-1 3-721-342-11 | LID, PRESET CASE, UPPER WOOD (RIGHT) ASSY, SIDE WOOD (LEFT) ASSY, SIDE SCREW, SIDE WOOD | - | 18 19 20 21 22 | 3-722-122-01 *3-703-848-01 X-3713-409-1 X-3713-407-1 X-3713-408-1 | LABEL (N), SUB CAUTION KEY (2) ASSY, REW KEY (2) ASSY, FWD | |
| 3-716-867-11 X-3711-980-1 3-716-868-01 3-716-882-01 *3-716-913-21 | KNOB, HP COVER ASSY, SLIDE KEY, SLIDE KNOB, SLIDE PLATE, BOTTOM | | 23 24 25 26 27 | 3-716-856-11 X-3713-412-1 X-3713-410-1 X-3713-413-3 3-689-531-01 | KEY (2) ASSY, PAUSE KEY (2) ASSY, X2 KEY (2) ASSY, REC | 27 |
| 3-722-147-01 X-3713-423-1 3-722-148-01 3-721-343-11 X-3713-428-1 | SPACER (A), FOOT FOOT ASSY (G) SPACER (B), FOOT SCREW (M4X10), FIXED PANEL ASSY, FRONT 17, 18 | , 20-27 | 28 29 30 31 32 | 3-720-487-21 3-721-202-21 3-716-831-01 1-464-784-11 1-464-785-71 | SPACER ENCODER, ROTARY | |
| *3-703-845-01 3-722-133-01 | LABEL (N) (U/C), MAIN CAUTION CAP, COUNTER BUTTON | | 33 | 3-722-162-01 | STAY, BOTTOM | |

5-2. POWER BLOCK AND REAR PANEL ASSEMBLIES

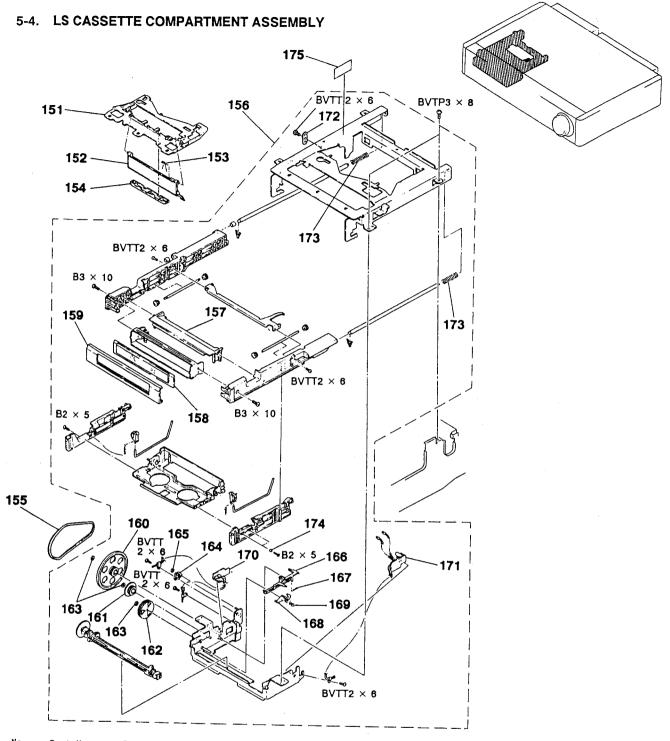


| N. | David N | Describitor | | | | B | |
|-----|----------------------------------|---------------------------|--------|-----|---------------|--------------------------|--------|
| No. | Part No. | Description | Remark | No. | Part No. | Description | Remark |
| 51 | ∆.1-448-837-11 | TRANSFORMER, POWER (T401) | | 66 | 3-710-901-11 | SCREW (3X8), TAPPING | |
| 52 | *1-621-991-11 | | | 67 | | IO-17 BOARD, COMPLETE | |
| 53 | | SHEET (LARGE), INSULATING | | 68 | *1-629-042-11 | | |
| 54 | *A-7070-324-A | DT-63 BOARD, COMPLETE | | 69 | 1-466-156-11 | MODULATOR, RF (RFU-1011) | |
| 55 | 3-680-719-11 | GUIDE, CHASSIS | | 70 | *3-722-137-01 | CHASSIS, REAR | |
| | | | | | | | |
| 56 | | DR-35 BOARD, COMPLETE | | 71 | | HINGE, CIRCUIT BOARD | |
| 57 | *1-621-992-11 | | | 72 | *A-7061-371-B | VI-57 BOARD, COMPLETE | 73-78 |
| 58 | | BRACKET, DO-1 MOUNT | | 73 | *A-7061-374-A | YC-56 BOARD, COMPLETE | |
| 59 | *1-621-993-11 | DL -15 BOARD | | 74 | *3-703-353-07 | SUPPORT, PC BOARD | |
| 60 | △.1-526-882-00 | OUTLET, AC | | 75 | *A-7061-373-A | CH-44 BOARD, COMPLETE | |
| | | | | | | | |
| 61 | 1-551-478-00 1-551-478-00 | CORD, POWER | | 76 | *A-7061-494-A | NC-8 BOARD, COMPLETE | |
| 62 | 3-646-090-00 | RIVET, NYLON | | 77 | *3-722-118-01 | RETAINER, JG PC BOARD | |
| 63 | *3-716-911-21 | COVER, POWER | | 78 | | JG-11 BOARD, COMPLETE | |
| 64 | *3-703-270-00 | LABEL, AC120V 60HZ | | 79 | | LABEL, TELESONIC | |
| 65 | 3-722-136-11 | PANEL, REAR | ı | 80 | *3-704-367-01 | | |
| | | | | | | , · · · , | |

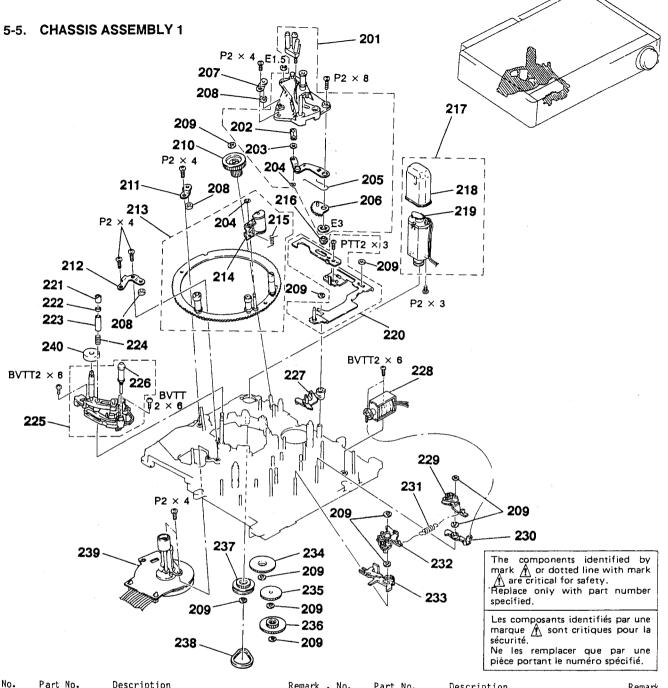
5-3. BOARD ASSEMBLY



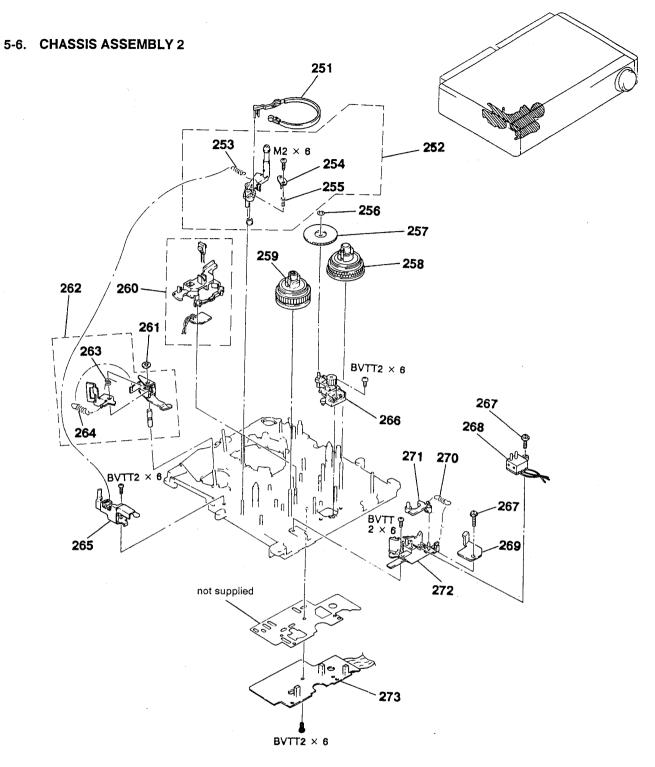
| No. | Part No. | Description | Remark | No. | Part No. | Description | Remark |
|---------------------------------|---|--|---------|---------------------------------|--|--|--------|
| 101 102 103 104 105 | *A-7061-727-A | | 107 | 115 116 117 118 119 | *3-716-961-01 *A-7060-462-A 1-463-771-11 | | 118 |
| 106 107 108 109 110 | *A-7061-073-A *X-3711-990-1 *3-716-962-01 | PR-12 BOARD, COMPLETE DM-18 BOARD, COMPLETE PLATE (AU) ASSY, SHIELD BRACKET (AU) AU-54 BOARD, COMPLETE | 111-114 | 120 121 122 123 124 | 3-716-907-01 *A-7051-370-A *A-7061-674-A | RP-68 BOARD, COMPLETE PROTECTOR, FRAME PW-62 BOARD, COMPLETE FT-37 BOARD, COMPLETE MJ-11 BOARD, COMPLETE | |
| 111 112 113 114 | *A-7060-913-A *A-7068-148-A | AD-12 BOARD, COMPLETE NR-6 BOARD, COMPLETE MK-2 BOARD, COMPLETE AF-20 BOARD, COMPLETE | | 125 126 127 | 3-722-158-01 *1-629-041-11 *1-621-987-11 | | |



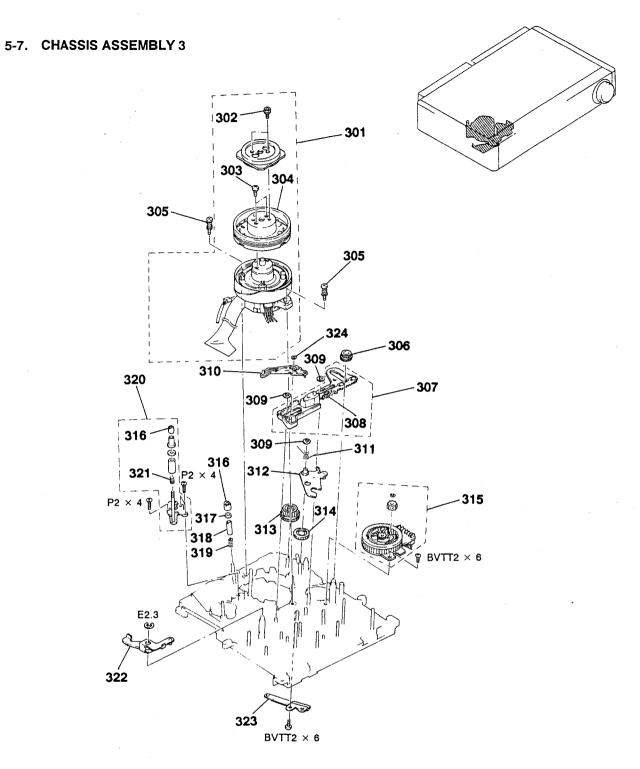
| No. | Part No. | Description | Remark | No. | Part No. | Description | Remark |
|---------------------------------|--|---|---------|---------------------------------|---|---|--------|
| 151 152 153 154 155 | 3-716-908-01 X-3711-965-1 3-713-686-01 3-716-884-01 3-713-670-01 | CLAMP, LAMP MIRROR ASSY SPRING HOLDER, LAMP BELT, LS | | 164 165 166 167 168 | 3-716-821-01 3-669-465-00 3-716-937-01 3-716-825-01 3-716-850-01 | ARM, SW WASHER (1.5), STOPPER SLIDER, LOCK SPRING, TENSION HOLDER, LOCK | |
| 156 157 158 159 160 | 3-716-885-01 3-722-117-01 | CASSETTE COMPARTMENT ASSY (2) PLATE, SLOPE GLASS (2), WINDOW PLATE, ORNAMENTAL, WINDOW PULLEY, MIDWAY | 157-174 | 169 170 171 172 173 | 3-713-687-01 *1-621-998-11 *1-621-997-11 *3-716-944-01 3-716-949-01 | BRACKET, STOPPER, SHAFT | |
| 161 162 163 | 3-716-819-01 X-3711-968-1 3-669-596-00 | GEAR, DECELERATION GEAR ASSY, LIMITER WASHER (2.3), STOPPER | | 174 175 | *3-657-841-01 *3-703-044-26 | SPACER 2X2 LABEL, CAUTION | |



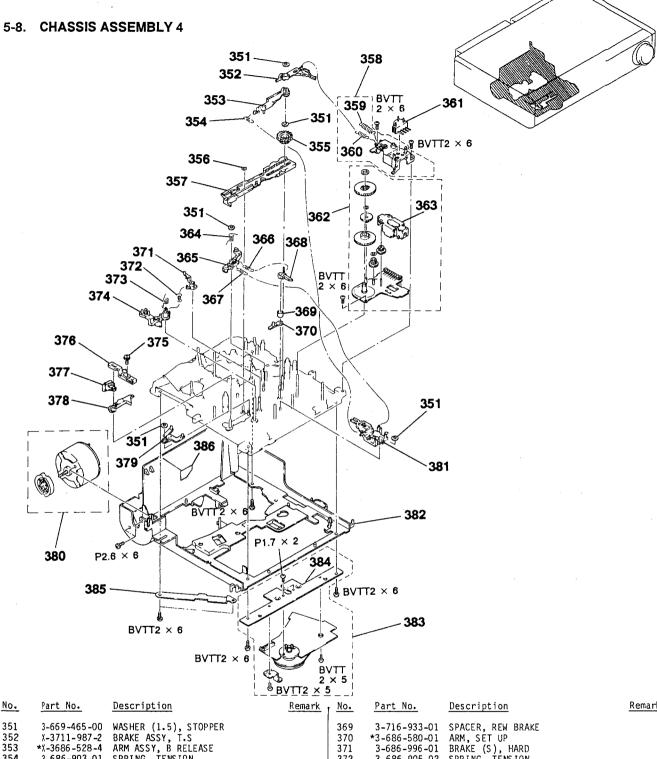
| No. | Part No. | Description | Remark | No. | Part No. | Description | Remark |
|---------------------------------|--|--|---------------------------------|---------------------------------|---|--|--------|
| 201 202 203 204 205 | 3-686-663-01 3-701-436-21 | GUIDE BLOCK ASSY, SLANT WASHER, STOPPER, 2 GANG WASHER, POLYEHTHYLENE WASHER, STOPPER SPRING | 202-206 | 221 222 223 224 225 | 3-686-912-01 | FLANGE, #3 #4 GUIDE GUIDE, #3 #4 SPRING, COMPRESSION | 226 |
| 206 207 208 209 210 | *3-686-503-01 3-697-538-01 | GEAR, SECTOR RETAINER, ROLLER ROLLER, RING WASHER (1.5), STOPPER GEAR, NO.10 | | 226 227 228 229 230 | *3-686-636-04 | | 01) |
| 211 212 213 214 215 | *3 -686 -675 -01 A -7040 -123 -A X -3686 -648 -1 | PLATE, TOP, ROLLER STOPPER, RING RING ASSY, THREADING ARM ASSY, PINCH ROLLER SPRING, TORSION | 204, 214, 215 | 231 232 233 234 235 | 3-713-560-01 X-3713-429-1 *3-686-629-01 3-686-508-01 3-686-545-01 | BRAKE ASSY, MAIN, S SLIDER, SELECTION, UPPER & LOW GEAR, NO. 2 | ER |
| 216 217 218 219 220 | A-7040-065-A *3-686-757-01 1-161-057-00 | RETAINER, LOCK SLODER MOTOR ASSY, L (THREADING)(CAP, SHIELD, L MOTOR CAP, CERAMIC 0.033MF X SLIDER ASSY, LOCK | (M904) 218, 219 — 2 1 | 238 239 240 | | GEAR ASSY, NO.1 BELT, L- MOTOR MOTOR, DC BHF-2804D (CAPSTAN) | (M906) |



| No. | Part No. | Description | Remark | No. | Part No. | Description | Remark |
|---------------------------------|---|---|----------|---------------------------------|---------------|---|--------|
| 251 252 253 254 255 | X-3686-531-1 A-7040-071-A 3-699-519-01 *X-3686-523-1 3-669-666-00 | ARM ASSY, TENSION REGULATOR SPRING, TENSION PLATE ASSY, TENSION REGULATOR | 253-255 | 263 264 265 266 267 | | SPRING, TORSION SPRING, TENSION HOOK ASSY, SPRING DRIVING COMPLETE ASSY + PTPWH 2 | |
| 256 257 258 259 260 | X-3711-998-1 | WASHER, STOPPER GEAR (B) ASSY, DRIVING TABLE ASSY, REEL, TAKE-UP TABLE ASSY, REEL, S LD-1 BOARD, COMPLETE | | 268 269 270 271 272 | | STOPPER, REEL TABLE | |
| 261 262 | 3-669-465-00 A-7040-008-A | WASHER (1.5), STOPPER ARM ASSY, PINCH PRESS | 263, 264 | 273 | *A-7061-543-A | RS-17 BOARD, COMPLETE | |



| No. | Part No. | <u>Description</u> R | Remark | No. | Part No. | Description | Remark |
|---------------------------------|--|--|---------------|---------------------------------|--|--|----------|
| 301 302 303 304 305 | 3-686-422-01 3-686-493-01 A-7049-188-A | DRUM ASSY (DGH-35A-R) 30 WASHER (2X2.7), BOLT, HOLE SCREW +P 2X5 TYPE 1 DRUM ASSY, ROTARY (UPPER) (DGR-35- SCREW ASSY, FITTING | 02-304 -R) | 313 314 315 316 317 | | GEAR, NO.8 | |
| 306 307 308 309 310 | *A-7040-010-A 3-686-886-01 | GEAR, DRIVING, GUIDE, SLANT SLIDER ASSY, L SPRING, TENSION WASHER (1.5), STOPPER ARM ASSY | 308 | 318 319 320 321 322 | 3-699-609-01 A-7040-058-A 3-699-514-01 | GUIDE, #3 #4 SPRING, COMPRESSION GUIDE BLOCK COMPLETE ASSY, #5 SPRING, COMPRESSION LEVER ASSY, PINCH PRESS | 316, 321 |
| 311 312 | | SPRING, TORSION CHANGE ASSY, DRIVE | | 323 324 | 1-535-535-11 3-315-384-31 | TERMINAL, SHAFT GROUND WASHER, STOPPER | |



| No. | Part No. | Description | Remark | No. | Part No. | Description | Remark |
|---------------------------------|---|---|-------------|---------------------------------|---|--|-------------------|
| 351 352 353 354 355 | 3-669-465-00 X-3711-987-2 *X-3686-528-4 3-686-903-01 3-686-909-01 | WASHER (1.5), STOPPER BRAKE ASSY, T.S ARM ASSY, B RELEASE SPRING, TENSION GEAR, MODE OUTPUT | | 369 370 371 372 373 | 3-716-933-01 *3-686-580-01 3-686-996-01 3-686-905-02 3-686-603-04 | ARM, SÉT UP BRAKE (S), HARD SPRING, TENSION | |
| 356 357 358 359 360 | 3-315-384-31 3-716-935-01 A-7040-168-A 3-722-110-01 3-714-035-01 | SLIDER, M COVER ASSY, C MOTOR SPRING, TENSION | 359, 360 | 374 375 376 377 378 | *3-686-644-01 3-686-528-01 *3-686-642-01 3-716-934-01 *3-686-643-01 | PLATE, ADJÚSTMENT, BAND | |
| 361 362 363 364 365 | 1-571-680-21 A-7090-029-A 8-835-138-01 3-686-579-01 *3-686-634-01 | SWITCH, PUSH (3 KEY) (RI M-SW ASSY MOTOR, DC (DNR-5301B) (G SPRING ARM, RL | 363 | 379 380 381 382 383 | *X-3686-530-1 A-7090-661-A *3-686-656-01 *3-716-915-01 8-835-282-03 | MOTOR BLOCK ASSY, LS(LINEAR & A | ATE)(M905) 384 |
| 366 367 368 | | SPRING, TENSION SPRING, TENSION BRAKE ASSY, REW | — 21 | 384 385 386 6 — | *3-716-922-01 *3-716-894-01 *3-722-175-01 | BRACKET, REEL MOTOR RETAINER, ROTOR SPACER, MD | |

SECTION 6 ELECTRICAL PARTS LIST

TU-82

NOTE:

The components identified by mark or dotted line with mark are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque A sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifé,

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- —XX, —X mean standardized parts, so they may have some difference from the original one.
- RESISTORS

All resistors are in ohms
METAL: Metal-film resistor

METAL OXIDE : Metal Oxide-film resis-

tor

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- P SEMICONDUCTORS
 In each case, U: μ, for example:
 UA...: μΑ..., UPA...: μΡΑ...,
 UPB...: μPB..., UPC...: μΡC...,
 UPD...: μPD...
- CAPACITORS

 MF: μF, PF: μμF
- COILS MMH: mH, UH: μ

| the | ooard name. | | F : i | nonflam | mable | | | MMH:mH, | UH : μΙ | - | | |
|--------------|-------------------------------------|----------------------|--------------------|------------|-------------|---------------|------------------------------|------------------------------|--------------|------------|--------------|--------|
| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | | Remark |
| | *A-7060-462-A | TU-82 BOAR | D, COMPLETE | | | Q003 | 8-729-117-54 | | SA1175 | - F | | |
| | | | **** | | | Q004 Q006 | 8-729-178-54 8-729-178-54 | | | | | |
| | | ACITOR | | | | 0007 0008 | 8-729-178-54 8-729-900-80 | TRANSISTOR 2 TRANSISTOR D | SC2785 | -F | | |
| C001 C002 | 1 -102 -114 -00 1 -102 - 966 -00 | CERAMIC CERAMIC | 470PF 43PF | 10% 5% | 50V 50V | ,,,,,, | | | 7101146. | 3 | | |
| C003 C004 | 1-102-953-00 1-124-446-11 | CERAMIC ELECT | 18PF | 5 % | 50 V | | | SISTOR | | | | |
| C005 | 1-124-963-11 | ELECT | 47MF 33MF | 20% 20% | 10V 16V | R001 R002 | 1-249-413-11 1-249-417-11 | CARBON CARBON | 470 1K | 5% 5% | 1/4W 1/4W | |
| C006 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50 V | R003 R004 | 1-249-409-11 1-249-405-11 | CARBON CARBON | 220 100 | 5% 5% | 1/4W 1/4W | |
| C007 C008 | 1-130-477-00 1-124-902-00 | MYLAR ELECT | 0.0033MF 0.47MF | 5% 20% | 50V 50V | R005 | 1-249-421-11 | | 2.2K | | 1/4W | |
| CO09 CO10 | 1-102-112-00 1-102-112-00 | CERAMIC CERAMIC | 330PF 330PF | 10% 10% | 50V 50V | R007 R008 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| C011 | 1-102-112-00 | CERAMIC | 330PF | | | R009 | 1-247-891-00 1-247-903-00 | CARBON CARBON | 330K 1M | 5% 5% | 1/4W 1/4W | · |
| C012 C013 | 1-126-233-11 | ELECT | 22MF | 10% 20% | 50V 50V | R010 R011 | 1-249-428-11 1-249-421-11 | CARBON CARBON | 8.2K 2.2K | 5% 5% | 1/4W 1/4W | |
| C014 | 1-124-471-00 | ELECT CERAMIC | 1000MF 0.01MF | 20% | 6.3V 50V | R012 <u>A</u> | .1-247-825-31 | CARBON | 560 | 5% | 1/4W | |
| C015 | 1-124-443-00 | ELECT | 100MF | 20% | 10V | R013 R020 | 1-249-426-11 1-247-883-00 | CARBON CARBON | 5.6K 150K | 5% 5% | 1/4W 1/4W | |
| C016 C017 | 1-101-004-00 1-123-875-11 | CERAMIC ELECT | 0.01MF 10MF | 20% | 50V 50V | R021 R022 | 1-247-883-00 1-249-423-11 | CARBON | 150K | 5% | 1/4W | |
| C018 C022 | 1-123-875-11 1-123-875-11 | ELECT ELECT | 10MF 10MF | 20% 20% | 50V 50V | | | CARBON | 3.3K | 5% | 1/4W | |
| C023 | | FILM | 0.47MF | 10% | 63V | R023 R024 | 1-249-423-11 1-249-435-11 | CARBON CARBON | 3.3K 33K | 5% 5% | 1/4W 1/4W | |
| C024 C025 | | CERAMIC | 0.0022MF | 10% | 50V | R025 R026 | 1-249-417-11 1-249-417-11 | CARBON CARBON | 1K 1K | 5% 5% | 1/4W 1/4W | |
| C027 | 1-123-875-11 | CERAMIC ELECT | 0.0022MF 10MF | 10% 20% | 50V 50V | R027 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | · |
| C028 C030 | 1-123-875-11 1-124-963-11 | ELECT ELECT | 10MF 33MF | 20% 20% | 50V 16V | R028 R029 | 1-249-418-11 1-249-413-11 | CARBON CARBON | 1.2K 470 | 5% | 1/4W | |
| C035 | 1-102-121-00 | CERAMIC | 0.0022MF | 10% | 50V | R030 R031 | 1-249-418-11 1-249-413-11 | CARBON | 1.2K | 5% 5% | 1/4W 1/4W | |
| | CON | NECTOR | | 20% | 301 | | 1-212-946-00 | CARBON FUSIBLE | 470 3.3 | 5% 5% | 1/4W 1/2W | F |
| CN001 | | PIN, CONNECT | NP 20 | | | R033 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| CN002 | *1-560-893-00 *1-560-892-00 | PIN, CONNECT | OR 5P | | | R034 R035 | 1-249-429-11 1-249-428-11 | CARBON CARBON | 10K 8.2K | 5% 5% | 1/4W 1/4W | |
| 011003 | | | JR 4P | | | R036 R037 | 1-249-393-11 1-249-417-11 | CARBON CARBON | 10 1K | 5% 5% | 1/4W 1/4W | |
| D001 | <u>D10</u> | | | | | R038 | 1-249-421-11 | | 2.2K | 5% | 1/4W | |
| D001 | 8-719-911-19 | DIODE 1SS119 | | | | | | IABLE RESISTOR | | J,6 | 1/ TM | |
| | <u>IC</u> | | | | | RV002 | 1-228-994-00 | | - | , | | |
| 10001/ | 3-759-157-40 3-759-157-40 | | | | | | TUNE | | DON 10 | ` | | |
| | COIL | | | | | TUDO1A | 1-463-771-11 | _ | D 2014 | , | | |
| L001 L002 | 1-408-413-00 1-410-093-11 | INDUCTOR INDUCTOR | 22UH 33MMH | | | 100012.5 | | · | P-201A |) | | |
| L003 L004 | | INDUCTOR | 1 OUH 1 OUH | | | VI COO: | | <u>BLOCK</u> | | | | |
| L005 | 1-408-409-00 | INDUCTOR | 100H | | | VIFUU1/ | 1-464-817-31 | | -450S) | | | |
| | TRAN | IS ISTOR | | | Ì | | | NECTOR . | | | | |
| Q001 | 8-729-178-54 | TRANSISTOR 25 | C2785-F | | | W004 W005 | 1-566-286-11 1-566-287-11 | CONNECTOR, BO | ARD TO | BO ARD | 8P 1 OP | |
| Q002 | 8-729-117-54 | IRANSISTOR 25 | SA1175-F | | i | | · | | 10 | POUM | 101 | |

TS-49

| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | | Remark |
|--------------------------------------|--|-------------------------|---|--------------------------|----------------------------|--------------------------------------|--|-------------------------------------|------------------------------------|----------------------------|--------------------------------------|--------|
| | *A-7060-463-A | TS -49 BOARI | | | | | <u>con</u> | INECTOR | | | | |
| | CAP | ACITOR | | | | | *1-560-893-00 *1-560-892-00 | | | | | |
| C101 C102 | 1-124-446-11 1-101-004-00 | CERAMIC | 47MF 0.01MF | 20% | 10V 50V | 10101 | <u>IC</u> | TO MEDADA 11 | ~ n | | | |
| C105 C701 C702 | 1-101-004-00 1-123-875-11 1-123-382-00 | ELECT | 0.01MF 10MF 3.3MF | 20% 20% | 50V 50V 50V | IC102 IC701 | 8-759-604-16 8-759-602-52 8-752-030-26 8-752-030-26 | IC M58658P IC CXA1011P | .05P | | | |
| C703 C704 C705 | 1-130-495-00 1-124-499-11 | ELECT | 0.1MF 1MF | 5% 20% | 50V 50V | | 8-752-011-20 | | | | | |
| C706 C707 | 1-131-368-00 1-131-365-00 1-124-925-11 | TANTALUM | 3.3MF 10MF 2.2MF | 10% 10% 20% | 16V 16V 50V | 10850 | 8-759-602-48 COI | | | | | |
| C708 | 1-126-233-11 | | 22MF | 20% | 25V | L851 | 1-410-071-11 | | 10MM | 1H | | |
| C709 C710 C711 | 1-126-101-11 1-130-475-00 1-126-320-11 | MYLAR | 100MF 0.0022MF 10MF | 20% 5% 20% | 16V 50V 16V | | TRA | NS IS TOR | | | | |
| C712 | 1-130-487-00 | MYLAR | 0.022MF | 5% | 50V | Q851 Q852 | 8-729-178-54 | TRANSISTOR 2 TRANSISTOR 2 | SC2785 - | ·F | | |
| C713 C751 C752 | 1-123-875-11 1-123-875-11 1-123-382-00 | ELECT | 10MF 10MF 3.3MF | 20% 20% 20% | 50V 50V 50V | Q853 Q854 | 8-729-117-54 8-729-178-54 | TRANSISTOR 2 TRANSISTOR 2 | | | | |
| C753 C754 | 1-123-382-00 1-130-495-00 1-124-499-11 | MYLAR | 0.1MF 1MF | 5% 20% | 50V 50V 50V | | RES | ISTOR | | | | |
| C755 C756 C757 C758 | 1-131-368-00 1-131-365-00 1-124-925-11 1-126-233-11 | TANTALUM ELECT | 3.3MF 10MF 2.2MF 22MF | 10% 10% 20% 20% | 16V 16V 50V 25V | R100 R102 R103 R104 R107 | 1-249-429-11 1-249-429-11 1-249-429-11 1-249-429-11 1-249-429-11 | CARBON CARBON CARBON | 10K 10K 10K 10K 10K | 5% 5% 5% 5% 5% | 1/4W 1/4W 1/4W 1/4W 1/4W | • |
| C759 | 1-126-101-11 | | 100MF | 20% | 16V | R701 | 1-249-429-11 | | 10K | 5% | 1/4W | |
| C760 C761 C762 C763 C801 | 1-130-475-00 1-126-320-11 1-130-487-00 1-130-485-00 1-123-875-11 | ELECT MYLAR MYLAR | 0.0022MF 10MF 0.022MF 0.015MF | 5% 20% 5% 5% | 50V 16V 50V 50V | R702 R703 R704 R705 | 1-249-426-11 1-249-411-11 1-215-487-00 1-215-453-00 | METAL | 5.6K 330 560K 22K | 5% 5% 1% 1% | 1/4W 1/4W 1/6W 1/6W | |
| C802 C803 C808 | 1-130-483-00 1-130-487-00 1-123-875-11 | MYLAR MYLAR | 10MF 0.01MF 0.022MF 10MF | 20% 5% 5% 20% | 50V 50V 50V 50V | R706 R707 R708 R709 | 1-249-420-11 1-249-421-11 1-249-435-11 1-249-411-11 | CARBON CARBON | 1.8K 2.2K 33K 330 | 5% 5% 5% 5% | 1/4W 1/4W 1/4W 1/4W | |
| C809 C810 | 1-130-489-00 1-123-875-11 | | 0.033MF 10MF | 5% 20% | 50 V 50 V | R751 | 1-249-429-11 | | 10K | 5 % | 1/4W | |
| C811 C812 C813 C815 C816 | 1-130-021-00 1-124-438-00 1-126-157-11 1-123-875-11 1-124-963-11 | ELECT ELECT ELECT | 0.0018MF 1MF 10MF 10MF 33MF | 5% 20% 20% 20% | 50V 50V 16V 50V | R752 R753 R754 R755 R756 | 1-249-426-11 1-249-411-11 1-215-487-00 1-215-453-00 1-249-420-11 | CARBON | 5.6K 330 560K 22K 1.8K | 5% 5% 1% 1% 5% | 1/4W 1/4W 1/6W 1/6W 1/4W | |
| C817 C818 C851 | 1-123-875-11 1-124-927-11 | ELECT | 10MF 4.7MF 0.0022MF | 20% 20% 20% 10% | 16V 50V 50V 50V | R757 R758 R759 R760 | 1-249-421-11 1-249-435-11 1-249-411-11 1-215-421-00 | CARBON CARBON CARBON METAL | 2.2K 33K 330 1K | 5% 5% 5% 1% | 1/4W 1/4W 1/4W 1/6W | |
| C852 C853 | 1-124-499-11 1-123-875-11 | ELECT | 1MF 10MF | 20% 20% | 50V 50V | R761 | 1-215-421-00 | METAL | 1K | 1% | 1/6% | |
| C854 C855 C857 | 1-130-479-00 1-123-875-11 1-123-875-11 | ELECT | 0.0047MF 10MF 10MF | 5% 20% 20% | 50V 50V 50V | R802 R803 R804 R808 R809 | 1-215-469-00 1-215-469-00 1-249-441-11 1-249-429-11 1-249-414-11 | METAL | 100K 100K 100K 10K 560 | 1% 1% 5% 5% 5% | 1/6W 1/6W 1/4W 1/4W 1/4W | |

TS-49 PR-12 DS-15 TM-94

| No. Part No. | Description | | | | Remark | No. | Part No. | Description | | | | Remark |
|---|--|-----------------------------------|----------------------------|--------------------------------------|--------|---|--|---|----------------------------------|-------------------------|----------|-------------------|
| R813 1-215-430-00 R814 1-249-428-11 R815 1-249-423-11 R819 1-247-903-00 R820 1-249-415-11 | CARBON CARBON CARBON | 2.4K 8.2K 3.3K 1M 680 | | 1/6W 1/4W 1/4W 1/4W 1/4W | | \$005 \$006 \$008 \$009 \$011 | 1-554-174-00 1-553-716-11 1-554-174-00 1-554-174-00 1-554-174-00 | SWITCH, SLI SWITCH, KEY SWITCH, KEY | DE (AUTÓ BOARD (E BOARD (A | STEREO) RASE) DD) | | () |
| R821 1-249-429-11 R851 1-249-437-11 R852 1-249-429-11 R853 1-249-418-11 R854 1-249-413-11 | CARBON CARBON CARBON | 10K 47K 10K 1.2K 470 | 5% 5% 5% 5% 5% | 1/4W 1/4W 1/4W 1/4W 1/4W | | | ************ *1-621-991-11 *1-533-189-11 | DS -15 BOARI |) * | ***** | *** | ***** |
| R855 1-249-418-11 R856 1-249-429-11 R857 1-249-425-11 R858 1-249-438-11 R859 1-249-425-11 | CARBON CARBON CARBON | 10K 4.7K 56K | 5% 5% 5% 5% 5% | 1/4W 1/4W 1/4W 1/4W 1/4W | | | <u>CAP</u> . 1-136-212-12 | ACITOR FILM | 0.1MF | 20% | , | 250 V |
| R860 1 -249 -435 -11 | CARBON | 33K | 5% | 1/4W | | CNAO1 | *1-560-891-00 | NECTOR DIN CONNEC | FAD 2D | | | |
| VAF | MIABLE RESISTOR | | | | | CN401 | | • | iuk or | | | |
| RV702 1-228-993-00 RV752 1-228-993-00 RV802 1-228-996-00 | RES, ADJ, CARE | 30N 4.7 | ′K - | | | F401 <u></u> | FUS -1-532-536-00 | | -TUBE | | | |
| RV803 1-228-997-00 RV804 1-228-999-00 | RES, ADJ, CARE | | | | | | RES | ISTOR | | | | |
| RV805 1-228-994-00 RV806 1-228-994-00 | | | | | | R402 <u>A</u> | . 1-202-729 <i>-</i> 00 <u>TRA</u> | SOLID NSFORMER | 6.8M | 10% 1/ | '2W | |
| <u>C01</u> | INECTOR | | | | | T402 <u></u> Λ | . 1 - 421 - 357 - 31 | TRANS FORMER | , LINE FII | _TER | | |
| | CONNECTOR, BOA | | | | | | ***** | | | ***** | *** | ***** |
| CRY | 'S TAL | | | | | | *1-623-612-11 | TM-94 BOARE | | | | |
| X101 1-567-152-00 | OSCILLATOR, CE | | • | | ****** | | *3-716-962-01 7-685-646-79 7-685-646-79 | SCREW +BYTP | 3X8 TYPE | | | |
| *A-7060-465-A | PR-12 BOARD, | | | | | | CAP | ACITOR | | | | |
| _ | INECTOR | | | | | C001 C002 C003 | 1-130-495-00 1-124-925-11 1-101-004-00 | ELECT | 0.1MF 2.2MF 0.01MF | 5% 20% | ; | 50V 50V 50V |
| CN001 1-506-481-11 CN002 1-506-483-21 | | | | | | | CON | NECTOR | | | | |
| DIO | DDE | | | | | CN001 | *1-564-019-11 | PIN, CONNECT | OR 9P | | | |
| | DIODE 1SS119 | | | | | | <u>IC</u> | | | | | |
| D003 8-719-911-19 | DIODE 1SS119 DIODE 1SS119 DIODE 1SS119 | | | | | IC002 | 8-759-200-90 8-759-240-11 8-759-240-11 | IC TC4011BP | | | | |
| SWI | TCH | | | | | 15000 | | ISTOR | | | | |
| \$002 1-553-716-11 \$003 1-553-716-11 | SWITCH, SLIDE SWITCH, SLIDE SWITCH, KEY BO | (COMMA | ND) W) | |) | R001 R002 | 1-249-433-11 1-249-434-11 | CARBON | | | 4W 4W | |

The components identified by mark \(\frac{\hat{\Lambda}}{\text{or}} \) or dotted line with mark \(\frac{\hat{\Lambda}}{\text{are critical for safety.}} \)
Replace only with part number specified.

Les composants identifiés par une marque 🛕 sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

TM-94 RP-68

| No. | Part No. | Description | | Remark | No. | Part No. | Description | | | Remark |
|--------------------------------------|--|--|-----------------------------|----------------------------------|--|--|--|---------------------------------------|---------------------------------------|--|
| RV001 | <u>VAR</u> 1-228-996-00 | RES, ADJ, CARBON 47K | ***** | ***** | C148 C149 C150 C151 C153 | 1-163-809-11 1-163-091-00 1-163-809-11 1-163-090-00 1-163-009-11 | CERAMIC CHIP | 8PF 0.047MF 7PF | 10% 0.25PF 10% 0.25PF 10% | 25V |
| | | RP-68 BOARD, COMPLETE | | | C160 C201 C202 C203 | 1-135-157-21 1-135-148-21 1-135-148-21 1-163-021-00 | TANTAL. CHIP TANTAL. CHIP CERAMIC CHIP | 1.5MF 1.5MF 0.01MF | 20% 20% 20% | 6.3V 10V 10V 50V |
| C101 C102 C103 C104 C105 | 1-135-148-21 1-163-021-00 1-163-021-00 | TANTAL. CHIP 1.5MF TANTAL. CHIP 1.5MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF TANTAL. CHIP 22MF | 20% 20% 20% | 10V 10V 50V 50V 6.3V | C204 C205 C206 C207 C208 | 1-163-021-00 1-135-161-21 1-163-038-00 1-163-038-00 1-135-161-21 | CERAMIC CHIP CERAMIC CHIP TANTAL. CHIP | 22MF 0.1MF 0.1MF 22MF | 20% | 50V 6.3V 25V 25V 6.3V |
| C106 C107 C108 C109 C110 | 1-163-038-00 1-163-038-00 1-135-161-21 1-163-021-00 1-163-809-11 | CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF TANTAL. CHIP 22MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.047MF | 20% 10% | 25V 25V 6.3V 50V 25V | C209 C210 C211 C212 C213 C214 | 1-163-021-00 1-163-809-11 1-163-021-00 1-163-021-00 1-163-092-00 1-162-993-11 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.047MF 0.01MF 0.01MF 9PF | 10% 0.25PF 10% | 50V 25V 50V 50V 50V 16V |
| C111 C112 C113 C114 C115 | 1-163-021-00 1-163-092-00 1-162-993-11 | CERAMIC CHIP 0.022MF CERAMIC CHIP 0.01MF CERAMIC CHIP 9PF CERAMIC CHIP 0.22MF CERAMIC CHIP 0.01MF | 0.25PF 10% | 50V 50V 50V 16V 50V | C215 C216 C217 C218 C219 | 1-163-021-00 1-163-809-11 1-163-021-00 1-163-021-00 1-163-092-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.01MF 0.047MF 0.01MF 0.01MF | 10% 0.25PF | 50V 25V 50V 50V |
| C116 C117 C118 C119 C120 | 1-163-033-00 1-163-021-00 1-163-092-00 1-162-993-11 | CERAMIC CHIP 0.047MF CERAMIC CHIP 0.022MF CERAMIC CHIP 0.01MF CERAMIC CHIP 9PF CERAMIC CHIP 0.22MF | 10% 0.25PF 10% | 25V 50V 50V 50V 16V | C220 C221 C222 C223 C224 | 1-162-993-11 1-163-021-00 1-163-088-00 1-163-021-00 1-163-077-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.01MF 5PF 0.01MF | 10% 10% 0.25PF | 16V 50V 50V 50V 50V |
| C121 C122 C123 C124 C125 | 1-163-088-00 1-163-021-00 1-163-077-00 1-135-161-21 | CERAMIC CHIP 5PF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.1MF TANTAL. CHIP 22MF | 10% 0.25PF 20% | 50V 50V 50V 50V 6.3V | C225 C226 C227 C228 C229 | 1-135-161-21 1-163-021-00 1-163-021-00 1-135-091-00 1-135-161-21 | CERAMIC CHIP CERAMIC CHIP TANTAL. CHIP | 0.01MF 0.01MF 1MF | 20% 20% 20% | 6.3V 50V 50V 16V 6.3V |
| C126 C127 C128 C129 C130 | 1-135-161-21 | CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF ELECT 1MF TANTAL. CHIP 22MF CERAMIC CHIP 0.01MF | 20% 20% | 50V 50V 50V 6.3V 50V | C230 C231 C232 C233 C239 | 1-163-021-00 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP TANTAL, CHIP CERAMIC CHIP | 0.01MF 0.01MF 1MF 5PF | 10% 20% 0.25PF | 50V 50V 16V |
| C131 C132 C133 C134 C136 | 1-135-091-00 1-163-088-00 1-163-035-00 1-163-017-00 | CERAMIC CHIP 0.01MF TANTAL. CHIP IMF CERAMIC CHIP 5PF CERAMIC CHIP 0.047MF CERAMIC CHIP 0.0047MF | 10% 20% 0.25PF 10% | 50V 50V | C240 C241 C242 C243 C244 | 1-163-038-00 1-163-038-00 1-163-021-00 1-135-157-21 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP TANTAL. CHIP | 0.1MF 0.1MF 0.01MF 10MF | 20% | 25V 25V 50V 6.3V 50V |
| C139 C140 C141 C142 C143 | 1-135-159-21 1-163-105-00 1-163-129-00 1-163-021-00 | CERAMIC CHIP 330PF CERAMIC CHIP 0.01MF | 20% 5% 5% | 50V 16V 50V 50V 50V | C245 C246 C247 C248 C249 | 1-163-121-00 1-163-105-00 1-163-809-11 1-163-090-00 1-163-121-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 33PF 0.047MF 7PF | 5% 5% 10% 0.25PF 5% | 50V 50V 25V 50V |
| C144 C145 C146 C147 | 1-163-021-00 1-163-127-00 | TANTAL. CHIP 10MF CERAMIC CHIP 0.01MF CERAMIC CHIP 270PF CERAMIC CHIP 39PF | 20% 5% 5% | 6.3V 50V 50V 50V | C250 C251 C252 | 1-163-103-00 1-163-809-11 1-163-090-00 | CERAMIC CHIP | 0.047MF | 5% 10% 0.25PF | 50V 25V 50V |

| No. | Part No. | Description | | Remark | No. | Part No. | Description | | Remark |
|--------------------------------------|--|---|-------------------------|---------------------------------|--------------------------------------|--|--|---|---|
| C253 C260 C301 C302 | 1-135-157-21 1-163-021-00 1-163-021-00 | CERAMIC CHIP 0.001MF TANTAL. CHIP 10MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF | 10% | 50V 6.3V 50V 50V | L203 L204 L205 L206 | 1-410-385-11 | INDUCTOR INDUCTOR CHIP INDUCTOR CHIP | 18UH 18UH 10UH 22UH | |
| C303 C304 C305 C306 | 1-163-021-00 1-163-021-00 1-163-038-00 | TANTAL. CHIP 10MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF | 20% | 16V 50V 50V 25V | L209 L301 L302 L401 | 1-408-970-21 1-410-387-11 1-408-948-00 | INDUCTOR CHIP | 220UH | |
| C307 C308 | 1-163-021-00 | CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF | | 50V 50V | L402 | 1-408-970-21 | INDUCTOR NS ISTOR | 10UH | |
| C309 C401 C402 C403 C404 | 1-163-021-00 1-163-009-11 | ELECT 10MF CERAMIC CHIP 0.001MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.001MF CERAMIC CHIP 100PF | 20% 10% 10% 5% | 16V 50V 50V 50V 50V | Q101 Q102 Q103 Q104 | 8-729-202-38 8-729-202-38 8-729-901-05 | TRANSISTOR 2SC TRANSISTOR 2SC TRANSISTOR DTA TRANSISTOR 2SA | :3326N :124EK | |
| C405 C406 C407 C408 C409 | 1-163-121-00 1-163-115-00 1-163-021-00 | CERAMIC CHIP 100PF CERAMIC CHIP 150PF CERAMIC CHIP 82PF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF | 5% 5% 5% | 50V 50V 50V 50V 50V | Q105 Q106 Q107 Q201 Q202 | 8-729-102-07 8-729-102-07 8-729-202-38 8-729-202-38 | TRANSISTOR DTC TRANSISTOR 2SC TRANSISTOR 2SC TRANSISTOR 2SC TRANSISTOR 2SC | 2223-F13 2223-F13 3326N 3326N | |
| C410 | 1-163-021-00 | CERAMIC CHIP 0.01MF | | 500 | Q203 Q204 | | TRANSISTOR DTA | | |
| | | NECTOR | | | 0205 0301 | 8-729-102-07 | TRANSISTOR 2SC TRANSISTOR 2SC TRANSISTOR 2SC | 2223-F13 | |
| CN002 CN003 CN004 | *1-506-467-11 *1-506-471-11 1-506-470-11 | SOCKET, CONNECTOR 19P PIN, CONNECTOR 2P PIN, CONNECTOR 6P PIN, CONNECTOR 5P | | | Q302 Q303 Q304 | 8-729-901-01 8-729-901-01 8-729-100-66 | TRANSISTOR DTC TRANSISTOR DTC TRANSISTOR 2SC | 144EK 144EK 1623 | |
| CN006 CN007 | 1-506-468-11 1-506-468-11 | PIN, CONNECTOR 8P PIN, CONNECTOR 3P PIN, CONNECTOR 3P PIN, CONNECTOR 7P | | <u>.</u> | Q307 Q308 Q402 Q403 | 8-729-100-66 8-729-100-76 | TRANSISTOR 2SC TRANSISTOR 2SC TRANSISTOR 2SA TRANSISTOR 2SA | 1623 812 | |
| 0,,000 | DIO | DE_ | | | Q405 | 8-729-312-22 | TRANSISTOR 2SA | 1122 | |
| D101 D102 | 8-719-100-03 | | | 1 | 2101 | | ISTOR | | |
| D103 D202 D203 | 8-719-801-48 8-719-801-41 8-719-801-48 8-719-801-41 | DIODE 1SS196 DIODE 1SS193 | | | R101 R102 R103 R104 R105 | 1-216-214-00 1-216-065-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 4.7K 5% 4.7K 5% 4.7K 5% 4.7K 5% | 1/8W 1/10W 1/8W 1/10W |
| | <u>IC</u> | | | | R106 | 1-216-089-00 | | 27K 5% 47K 5% | 1/10W 1/10W |
| IC001 IC002 | 8-752-033-00 8-752-033-00 | IC CXA1234AR | | | R107 R108 R109 | 1-216-077-00 1-216-077-00 1-216-055-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 15K 5% 15K 5% 1.8K 5% | 1/10W 1/10W 1/10W |
| L101 | <u>COI</u> 1-410-656-11 | - | | | R110 R111 | 1-216-089-00 | | 47K 5% 22K 5% | 1/10W 1/10W |
| L102 L103 L104 L105 | | INDUCTOR CHIP 22UH INDUCTOR 18UH INDUCTOR 18UH | | | R112 R113 R114 R115 | 1-216-091-00 1-216-077-00 1-216-075-00 1-216-055-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 22K 5% 56K 5% 15K 5% 12K 5% 1.8K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W |
| L106 L109 L201 L202 | 1-410-656-11 | INDUCTOR CHIP 22UH INDUCTOR CHIP 100UH INDUCTOR CHIP 150UH INDUCTOR CHIP 22UH | | | R116 R117 R118 R119 | 1-216-089-00 1-216-053-00 1-216-035-00 1-216-025-00 | METAL GLAZE METAL GLAZE | 47K 5% 1.5K 5% 270 5% 100 5% | 1/10W 1/10W 1/10W 1/10W |

RP-68 PW-62

| No. | Part No. | Description | | | | Remark | No. | Part No. | <u>Description</u> | | | | Remark |
|--------------------------------------|--|---|--------------------------------------|----------------------------|---|--------|--------------------------------------|--|---|------------------------------------|----------------------------|---|----------------------------|
| R120 R121 R122 R123 R126 | 1-216-025-00 1-216-053-00 1-216-682-11 1-216-683-11 1-216-061-00 | METAL GLAZE METAL GLAZE METAL CHIP METAL CHIP METAL GLAZE | 100 1.5K 20K 22K 3.3K | 0.50% | 1/10W 1/10W 1/10W 1/10W 1/10W | · | R244 R301 R302 R303 R304 | 1-216-296-00 1-216-089-00 1-216-073-00 1-216-045-00 1-216-091-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 47K 10K 680 56K | 5% 5% 5% 5% 5% | 1/8W 1/10W 1/10W 1/10W 1/10W | |
| R127 R128 R131 R134 R135 | 1-216-089-00 1-216-049-00 1-216-061-00 1-216-097-00 1-216-097-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 1K 3.3K 100K 100K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R305 R306 R307 R308 R309 | 1-216-061-00 1-216-085-00 1-216-077-00 1-216-039-00 1-216-047-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 3.3K 33K 15K 390 820 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R136 R137 R138 R139 R140 | 1-216-073-00 1-216-001-00 1-216-031-00 1-216-081-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10 180 22K 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R310 R311 R401 R402 R403 | 1-216-035-00 1-216-041-00 1-216-085-00 1-216-081-00 1-216-035-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 270 470 33K 22K 270 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R141 R142 R143 R144 R201 | 1-216-081-00 1-216-001-00 1-216-031-00 1-216-296-00 1-216-214-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 10 180 0 4.7K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/8W 1/8W | | R404 R405 R406 R407 R408 | 1-216-033-00 1-216-021-00 1-216-009-00 1-216-081-00 1-216-057-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 220 68 22 22K 2•2K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R202 R203 R204 R205 R206 | 1-216-065-00 1-216-214-00 1-216-065-00 1-216-085-00 1-216-091-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 4.7K 4.7K 4.7K 33K 56K | 5% 5% 5% 5% 5% | 1/10W 1/8W 1/10W 1/10W 1/10W | | R409 R410 R411 R412 R413 | 1-216-041-00 1-216-041-00 1-216-041-00 1-216-296-00 1-216-296-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 470 470 470 0 0 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/8W 1/8W | |
| R207 R208 R209 R210 R211 | 1-216-079-00 1-216-076-00 1-216-054-00 1-216-089-00 1-216-748-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 18K 13K 1.6K 47K 39K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R414 R415 R421 R422 R423 | 1-216-296-00 1-216-296-00 1-216-295-00 1-216-043-00 1-216-295-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 0 0 560 0 | 5% 5% 5% 5% 5% | 1/8W 1/8W 1/10W 1/10W 1/10W | |
| R212 R213 R214 R215 R216 | 1-216-091-00 1-216-079-00 1-216-075-00 1-216-054-00 1-216-089-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 56K 18K 12K 1.6K 47K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | RV201 | 1-230-496-11 1-230-496-11 1-230-496-11 | RES, ADJ, CAR RES, ADJ, CAR RES, ADJ, CAR | - RBON 10 RBON 10 RBON 10 | K K | | |
| R217 R218 | 1-216-053-00 1-216-049-00 | METAL GLAZE METAL GLAZE | 1.5K 1K | 5% 5% | 1/10W 1/10W | | | 1-230-496-11 | | | | ***** | ***** |
| R219 R220 R221 | 1-216-025-00 1-216-025-00 1-216-053-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 100 100 1.5K | 5% 5% 5% | 1/10W 1/10W 1/10W | | | *A-7051-370-A | PW-62 BOARD | , COMPL | ETE *** | | |
| R231 R232 R233 R234 R235 | 1-216-061-00 1-216-061-00 1-216-061-00 1-216-097-00 1-216-097-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 3.3K 3.3K 3.3K 100K 100K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | | *3-662-205-00 *3-674-390-00 *3-721-598-11 *3-722-119-01 | HOLDER (E), LEVEL HOLDER, LEVEL | .ED), ĹED | | | |
| R236 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | | 2001 | | ACITOR | 00045 | | 204 | 6 24 |
| R237 R238 R239 R240 | 1-216-001-00 1-216-081-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10 22K 10K 10K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | | C201 C202 C301 C401 | 1-124-635-00 1-124-635-00 1-124-257-00 1-124-257-00 | ELECT ELECT ELECT ELECT | 220MF 220MF 2.2MF 2.2MF | | 20% 20% 20% 20% | 6.3V 6.3V 35V 35V |
| R241 R242 | 1-216-081-00 1-216-001-00 | METAL GLAZE METAL GLAZE | 22K 10 | 5% 5% | 1/10W 1/10W | | | CON | NECTOR | | | | |
| R243 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | | CN202 | 1-506-469-11 | PIN, CONNECTO | OR 4P | | | |

PW-62 VI-57

| No. | Part No. | Description | | | | Remark | No. | Part No. | Description | | | Remark |
|------------------------------|------------------------------|--|---------------|-------------|----------------|--------|----------------------|---|------------------------------|---------------------------|---------------|-------------|
| | DIO | <u>DE</u> | | | | | | *A-7061-371-B | VI-57 BOARD | , COMPLETE | | |
| D101 D103 D104 D105 | 8-719-105-32 | DIODE SLP281C- DIODE RD2.7M-B DIODE EQA11-09 DIODE EQA11-09 | 2 A | | | | | *3-703-353-07 | , NC-8 Boar | the CH-44 Board and YC-56 | | 0), JG-11 |
| D201 | 8-719-920-05 | DIODE TLY123 | •• | | | | | *3-710-578-01 | COVER, VOLUM | E, 6 MOLD | | |
| D202 D203 | 8-719-920-05 8-719-920-05 | DIODE TLY123 DIODE TLY123 | | | | | | *3-722-118-01 7-685-646-79 7-685-646-79 | SCREW +BVTP | 3X8 TYPE2 I | T-3 | |
| | <u>IC</u> | | | | | | | CAP | ACITOR | | | |
| IC101 IC201 | 8-741-138-70 8-759-745-64 | IC BX-1387 IC NJM4560M | | | | | C001 C002 C003 | 1-163-021-00 1-126-177-11 | ELECT | 100MF | 20% | 50V 6.3V |
| | JAC | <u>K</u> | | | | | C089 | 1-126-157-11 1-163-035-00 | CERAMIC CHIP | | 20% | 16V 50V |
| J201 | 1-507-792-00 | JACK (HEADPHON | ES) | | | | C101 | 1-163-038-00 | | | | 25V |
| | <u>C01</u> | <u>L</u> | | | | | C102 C103 | 1-163-133-00 1-163-035-00 | CERAMIC CHIP | 0.047MF | 5% | 50V 50V |
| L201 | 1-408-972-21 | INDUCTOR | 15UH | | | | C104 C105 | 1-163-038-00 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 25V 50V |
| | LEV | EL METER | | | | | C106 | 1-163-021-00 | CERAMIC CHIP | 0.01MF | | 50V |
| LMU001 | 1-520-503-11 | METER UNIT, LE | D LEVE | EL | | | C107 C108 | 1-163-035-00 1-126-177-11 | | 0.047MF 100MF | 20% | 50V 6.3V |
| | RES | ISTOR | | | | | C109 C110 | 1-126-157-11 1-163-035-00 | ELECT CERAMIC CHIP | 10MF 0.047MF | 20% | 16V 50V |
| R101 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | | C111 | 1-124-438-00 | ELECT | 1MF | 20% | 50 V |
| R103 R201 | 1-216-073-00 1-216-029-00 | METAL GLAZE | 10K 150 | 5% 5% | 1/10W 1/10W | | C112 C113 | 1-126-154-11 1-126-094-11 | | 47MF 4.7MF | 20% 20% | 6.3V 25V |
| R202 R203 | 1-216-029-00 1-216-029-00 | METAL GLAZE | 150 150 | 5% 5% | 1/10W 1/10W | | C114 C115 | 1-126-094-11 | ELECT CERAMIC CHIP | 4.7MF | 20% | 25V 50V |
| R301 | 1-216-017-00 | | ¥7 | 5% | 1/10W | | C116 | 1-124-638-11 | ELECT | 22MF | 20% | 6.38 |
| R302 R303 | 1-216-065-00 | METAL GLAZE | | 5% 5% | 1/10W 1/10W | | C117 C118 | 1-163-113-00 | CERAMIC CHIP | 68PF | 5% | 50V |
| R304 R401 | 1-216-021-00 1-216-017-00 | METAL GLAZE | 58 | 5% | 1/10W | | C119 | 1-163-131-00 1-163-129-00 | CERAMIC CHIP | 330PF | 5% 5% | 50V 50V |
| R402 | | | 17 | 5% | 1/10W | | C120 C121 | | CERAMIC CHIP CERAMIC CHIP | | 5% 10% | 50V 50V |
| R403 | 1-216-065-00 | METAL GLAZE | L 2K | 5% 5% | 1/10W 1/10W | Ì | C122 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50 V |
| R404 | 1 -216 -021 -00 | | 8 | 5% | 1/10W | | C123 C124 | 1-163-088-00 1-126-094-11 | CERAMIC CHIP ELECT | 5PF 4.7MF | 0.25PF 20% | 50V 25V |
| | | ABLE RESISTOR | | | | | C125 C126 | | CERAMIC CHIP CERAMIC CHIP | | | 50V 50V |
| RV201 RV301 | 1-228-988-00 1-237-589-11 | RES, VAR, CARBO | N 10K 10K/ | /10K 10K | | | C127 | 1-163-035-00 | | | | 50V |
| | SWIT | | | | | | C128 C129 | 1-126-157-11 1-163-009-11 | ELECT | 10MF | 20% 10% | 16V 50V |
| \$101 | | SWITCH, KEY BOA | arn (n | N/STA | UDRY I | | C130 C131 | 1-163-134-00 1-163-021-00 | CERAMIC CHIP | 510PF | 5% | 50V |
| ***** | | ****** | • | | | ***** | | | | | 10% | 50V |
| | | | | | | | C132 C133 | 1-124-464-11 | CERAMIC CHIP | 0.22MF | 20% | 50V 50V |
| | | | | | | | C134 C135 | 1-126-157-11 | | 0.047MF 10MF | 20% | 50V 16V |
| | | | | | | | C136 | 1-126-157-11 | | 10MF | 20% | 16V |
| | | | | | | ļ | C137 C139 | | CERAMIC CHIP CERAMIC CHIP | | 5% | 50V 25V |

VI-57

| No. | Part No. | Description | | Remark | No. | Part No. | Description | | | Remark |
|--------------------------------------|---|--|---------------------------------|-----------------------------------|--------------------------------------|--|--|-----------------------------|-----------------------------|-----------------------------------|
| C140 C141 C142 C143 C144 | 1-163-241-11 1-163-111-00 1-124-229-00 1-163-123-00 1-163-137-00 | CERAMIC CHIP 39PF CERAMIC CHIP 56PF ELECT 33MF CERAMIC CHIP 180PF CERAMIC CHIP 680PF | 5% 5% 20% 5% 5% | 50V 50V 10V 50V 50V | C224 C225 C226 C227 C228 | 1-163-009-11 1-124-638-11 1-163-035-00 1-124-638-11 1-163-035-00 | CERAMIC CHIP ELECT CERAMIC CHIP ELECT CERAMIC CHIP | 22MF 0.047MF 22MF | 10% 20% 20% | 50V 6.3V 50V 6.3V 50V |
| C147 C148 C150 C151 C153 | 1-163-038-00 1-126-157-11 1-126-157-11 1-126-157-11 1-163-093-00 | CERAMIC CHIP 0.1MF ELECT 10MF ELECT 10MF ELECT 10MF CERAMIC CHIP 10PF | 20% 20% 20% 5% | 25V 16V 16V 16V 50V | C229 C231 C232 C234 C235 | 1-163-093-00 1-163-111-00 1-163-035-00 1-163-093-00 1-126-154-11 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP ELECT | 56PF 0.047MF | 5% 5% 5% 20% | 50V 50V 50V 50V 6.3V |
| C154 C155 C158 C160 C161 | 1-163-128-00 1-124-589-11 1-163-117-00 1-163-119-00 1-163-091-00 | CERAMIC CHIP 300PF ELECT 47MF CERAMIC CHIP 100PF CERAMIC CHIP 120PF CERAMIC CHIP 8PF | 5% 20% 5% 5% 0.25PF | 50V 10V 50V 50V 50V | C236 C237 C238 C239 C240 | 1-126-154-11 1-163-096-00 1-163-113-00 1-163-099-00 1-163-099-00 | ELECT CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 68PF 18PF | 20% 5% 5% 5% 5% | 6.3V 50V 50V 50V 50V |
| C162 C163 C164 C180 C181 | 1-163-105-00 1-123-875-11 1-163-111-00 1-163-035-00 1-163-035-00 | CERAMIC CHIP 33PF ELECT 10MF CERAMIC CHIP 56PF CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF | 5% 20% 5% | 50V 50V 50V 50V 50V | C301 C302 C303 C304 C305 | 1-163-119-00 1-163-111-00 1-163-117-00 1-163-125-00 1-163-117-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 56PF 100PF 220PF | 5% 5% 5% 5% 5% | 50V 50V 50V 50V 50V |
| C182 C183 C184 C185 C186 | 1-126-157-11 1-163-035-00 1-126-157-11 1-163-035-00 1-126-157-11 | ELECT 10MF CERAMIC CHIP 0.047MF ELECT 10MF CERAMIC CHIP 0.047MF ELECT 10MF | 20% 20% 20% | 16V 50V 16V 50V 16V | C306 C307 C308 C309 C310 | 1-163-021-00 1-163-081-00 1-163-133-00 1-163-009-11 1-163-129-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.22MF 470PF 0.001MF | 5% 10% 5% | 50V 25V 50V 50V 50V |
| C187 C190 C191 C195 C196 | 1-126-157-11 1-126-154-11 1-163-131-00 1-163-099-00 1-163-117-00 | ELECT 10MF ELECT 47MF CERAMIC CHIP 390PF CERAMIC CHIP 18PF CERAMIC CHIP 100PF | 20% 20% 5% 5% 5% | 16V 6.3V 50V 50V | C311 C312 C313 C314 C315 | 1-163-035-00 1-163-109-00 1-163-015-00 1-163-117-00 1-163-105-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 47PF 0.0033MF 100PF | 5% 10% 5% 5% | 50V 50V 50V 50V 50V |
| C198 C201 C202 C203 C204 | 1 -124-638-11 1-163-009-11 1-163-035-00 1-126-177-11 1-163-009-11 | ELECT 22MF CERAMIC CHIP 0.001MF CERAMIC CHIP 0.047MF ELECT 100MF CERAMIC CHIP 0.001MF | 20% 10% 20% 10% | 6.3V 50V 50V 6.3V 50V | C316 C317 C318 C319 C321 | 1-163-038-00 1-163-117-00 1-163-021-00 1-163-104-00 1-163-125-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 100PF 0.01MF 30PF | 5% 5% 5% | 25V 50V 50V 50V 50V |
| C205 C206 C207 C208 C209 | 1-163-125-00 1-163-105-00 | ELECT 3.3MF CERAMIC CHIP 33PF CERAMIC CHIP 220PF CERAMIC CHIP 33PF CERAMIC CHIP 0.01MF | 20% 5% 5% 5% | 50V 50V 50V 50V 50V | C322 C323 C325 C334 C336 | 1-163-021-00 1-163-038-00 1-163-038-00 1-163-021-00 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.1MF 0.1MF 0.01MF | | 50V 25V 25V 50V 50V |
| C211 C212 C213 C214 C215 | 1 -163-021-00 1-126-094-11 1-126-094-11 1-124-257-00 1-163-133-00 | CERAMIC CHIP 0.01MF ELECT 4.7MF ELECT 4.7MF ELECT 2.2MF CERAMIC CHIP 470PF | 10% 20% 20% 20% 5% | 50V 25V 25V 50V | C401 C402 C403 C404 C405 | 1-163-035-00 1-126-154-11 1-163-035-00 1-163-145-00 1-163-127-00 | CERAMIC CHIP ELECT CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 47MF 0.047MF 0.0015MF | 20% 10% 5% | 50V 6.3V 50V 50V |
| C216 C217 C218 C219 C220 | 1 -126 -094 -11 1 -163 -121 -00 1 -124 -257 -00 | CERAMIC CHIP 33PF ELECT 4.7MF CERAMIC CHIP 150PF ELECT 2.2MF CERAMIC CHIP 56PF | 5% 20% 5% 20% 5% | 50V 25V 50V 50V 50V | C406 C407 C408 C409 C410 | 1-163-035-00 1-163-035-00 1-163-115-00 1-163-021-00 1-163-090-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.047MF 82PF 0.01MF | 5% 0.25PF | 50V 50V 50V 50V 50V |
| C221 C222 C223 | 1-163-021-00 | CERAMIC CHIP 27PF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.047MF | 5% | 50V 50V 50V | C411 C412 C415 | 1-163-093-00 1-163-035-00 1-163-035-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.047MF | 5% | 50V 50V 50V |

| No. | Part No. | Description | | Remark | No. | Part No. | Description | | | Remark |
|--------------------------------------|--|---|-----------------------------|----------------------------------|--------------------------------------|--|---|--|--------------------------|-----------------------------------|
| C416 C417 C418 C419 C420 | 1-163-035-00 1-163-035-00 1-163-035-00 1-163-035-00 1-163-035-00 | CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF | | 50V 50V 50V 50V 50V | C539 C540 C541 C542 C601 | 1-163-035-00 1-126-154-11 1-163-035-00 1-163-103-00 1-163-101-00 | CERAMIC CHIE | 47MF 0.047MF 27PF | 20% 5% 5% | 50V 6.3V 50V 50V 50V |
| C421 C422 C423 C424 C425 | 1-163-097-00 1-163-093-00 1-163-099-00 1-163-090-00 1-163-035-00 | CERAMIC CHIP 10PF CERAMIC CHIP 18PF CERAMIC CHIP 7PF | 5% 5% 5% 0.25PF | 50V 50V 50V 50V 50V | C602 C603 C604 C605 C610 | 1-163-021-00 1-163-035-00 1-163-035-00 1-163-035-00 1-124-257-00 | CERAMIC CHIP CERAMIC CHIP | 0.047MF 0.047MF | 10% | 50V 50V 50V 50V 50V |
| C426 C427 C428 C429 C430 | 1-163-035-00 1-163-125-00 1-163-021-00 1-163-035-00 | | 5% | 50V 50V 50V 50V 50V | C612 C613 C614 C701 C702 | 1-163-099-00 1-126-094-11 1-163-133-00 1-124-471-00 1-163-035-00 | CERAMIC CHIP ELECT CERAMIC CHIP ELECT CERAMIC CHIP | 4.7MF 470PF 1000MF | 5% 20% 5% 20% | 50V 25V 50V 6.3V 50V |
| C431 C432 C433 C434 C435 | 1-163-101-00 1-126-094-11 | CERAMIC CHIP 0.01MF | 5% 20% 5% | 50V 50V 25V 50V 50V | C703 C704 C705 C706 C801 | 1-124-471-00 1-124-471-00 1-126-176-11 1-163-035-00 1-124-589-11 | ELECT ELECT | 1000MF 1000MF 220MF 0.047MF 47MF | 20% 20% 20% 20% | 6.3V 6.3V 10V 50V 10V |
| C437 C438 C439 C440 C441 | 1-163-103-00 1-163-109-00 1-124-463-00 | CERAMIC CHIP 10PF CERAMIC CHIP 27PF CERAMIC CHIP 47PF ELECT 0.1MF CERAMIC CHIP 39PF | 5% 5% 5% 20% 5% | 50V 50V 50V 50V 50V | C802 C803 C804 C805 C806 | | ELECT CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP ELECT | 0.1MF | 20% 20% | 6.3V 50V 25V 25V 6.3V |
| C442 C443 C444 C445 C448 | 1-163-103-00 1-163-021-00 1-126-094-11 | CERAMIC CHIP 39PF CERAMIC CHIP 27PF CERAMIC CHIP 0.01MF ELECT 4.7MF CERAMIC CHIP 10PF | 5% 5% 20% 5% | 50V 50V 50V 25V 50V | C808 C809 C810 C811 C812 | | ELECT CERAMIC CHIP ELECT | 47MF | 20% 20% 5% 20% | 6.3V 16V 50V 6.3V 50V |
| C450 C464 C470 C473 C501 | 1-163-035-00 | CERAMIC CHIP 82PF CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF | 20% 5% 20% | 50V 50V 50V 50V 6.3V | C813 C814 C815 C816 C817 | | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.01MF 0.1MF | 20% | 50V 50V 25V 25V 16V |
| C502 C503 C504 C505 C506 | 1-163-021-00 1-163-021-00 1-163-021-00 | CERAMIC CHIP 0.047MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.047MF | | 50V 50V 50V 50V 50V | C818 C819 C820 C821 C822 | 1-163-021-00 1-163-021-00 | CERAMIC CHIP | 0.01MF 0.01MF | 20% | 50V 50V 50V 50V 16V |
| C507 C509 C510 C511 C512 | 1-163-021-00 1-163-035-00 1-163-035-00 | CERAMIC CHIP 0.047MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF | | 50V 50V 50V 50V 50V | C823 C901 C902 C903 C904 | 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP ELECT CERAMIC CHIP CERAMIC CHIP | 0.01MF 10MF 0.01MF | 20% 10% | 50V 50V 16V 50V 25V |
| C515 C531 C532 C534 C535 | 1-163-129-00 1-163-119-00 1-163-035-00 | CERAMIC CHIP 0.047MF CERAMIC CHIP 330PF CERAMIC CHIP 120PF CERAMIC CHIP 0.047MF CERAMIC CHIP 15PF | 5% 5% | 50V 50V 50V 50V 50V | C905 C906 C907 C908 C910 | 1-163-809-11 1-163-021-00 1-126-157-11 | | 0.047MF | 10% 20% 20% | 50V 25V 50V 16V 16V |
| C536 C537 C538 | 1-163-101-00 | CERAMIC CHIP 0.047MF CERAMIC CHIP 22PF CERAMIC CHIP 36PF | 5% | 50V 50V 50V | C950 | 1-163-009-11 | ELECT CERAMIC CHIP CERAMIC CHIP | | 20% 10% 5% | 6.3V 50V 50V |

VI-57

| No. | Part No. | <u>Description</u> | Remark | No. | Part No. | Description | Remark |
|--------------------------------------|--|--|------------|--------------------------------------|--|---|---|
| C952 C953 | 1-163-035-00 | CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF TER FILTER, CERAMIC INECTOR | 50V 50V | FL201 FL202 FL203 | 1-236-370-11 1-235-496-11 1-415-637-11 1-415-652-11 1-409-397-11 | | |
| CF301 | 1-567-306-11 | FILTER, CERAMIC | | | | DELAY LINE, LC | |
| | CON | INECTOR | | 12001 | <u>IC</u> | DECITE LINES | |
| CN007 CN009 CN010 CN012 | 1-506-470-11 1-506-467-11 1-506-470-11 1-506-470-11 | PIN, CONNECTOR 8P PIN, CONNECTOR 5P PIN, CONNECTOR 2P PIN, CONNECTOR 5P PIN, CONNECTOR 5P | | IC002 IC101 IC102 | 8-759-200-84 8-759-200-79 | IC TC4081BF IC TC4049BF IC CX20030 IC CXA1047M IC CX20031 | |
| CN014 CN030 CN201 | 1-506-471-11 1-506-469-11 1-506-473-11 | PIN, CONNECTOR 2P PIN, CONNECTOR 6P PIN, CONNECTOR 4P PIN, CONNECTOR 8P PIN, CONNECTOR 2P | : | IC401 IC402 IC801 | 8-752-914-56 8-759-200-79 8-759-925-60 8-759-941-68 8-759-941-68 | IC CX23054 IC TA8607F IC BA401 IC BA7131F IC BA7131F | |
| CN311 CN701 | *1-566-148-11 1-506-472-11 1-506-472-11 | CONNECTOR, BOARD TO BOARD 19P CONNECTOR, BOARD TO BOARD 18P PIN, CONNECTOR 7P PIN, CONNECTOR 7P | | IC803 IC804 IC805 | 8-759-941-68 | | |
| | DIC | | | | <u>C01</u> | <u>L</u> | |
| D001 D002 D003 D004 D005 | 8-719-100-05 | DIODE 1S2837 DIODE 1S2837 DIODE 1S2837 DIODE 1S2835 DIODE 1S2835 | : | L101 L102 L103 L104 L106 | 1-408-970-21 1-408-973-21 1-408-972-21 1-408-976-21 1-408-973-21 | | 100H 180H 150H 330H 180H |
| D006 D008 D012 D013 D101 | 8-719-100-05 | DIODE 1S2835 DIODE 1S2837 DIODE 1S2837 DIODE 1S2837 DIODE 1S2837 DIODE 1SS193 | | L107 L110 L111 L112 L113 | 1-410-388-21 1-410-385-11 1-408-966-21 1-408-985-21 1-408-979-21 | INDUCTOR CHIP INDUCTOR CHIP INDUCTOR INDUCTOR INDUCTOR | 39UH 22UH 4.7UH 180UH 56UH |
| D104 D301 D303 D402 D403 | 8-719-100-03 | DIODE 1\$2835 DIODE 1\$2835 DIODE 1\$2835 DIODE 1\$2837 DIODE 1\$\$123 | | L114 L115 L116 L201 L202 | 1-408-973-21 1-410-378-11 1-408-980-21 1-408-972-21 1-408-984-21 | INDUCTOR INDUCTOR CHIP INDUCTOR INDUCTOR INDUCTOR INDUCTOR | 18UH 5.6UH 68UH 15UH 15OUH |
| D405 D410 D411 D601 D602 | 8-719-100-05 8-719-800-76 | DIODE 1S2837 DIODE 1S2837 DIODE 1S5123 DIODE 1S2837 DIODE 1S2837 | | L203 L204 L205 L206 L207 | 1-410-390-11 1-408-960-21 1-408-960-21 | INDUCTOR INDUCTOR CHIP INDUCTOR INDUCTOR INDUCTOR INDUCTOR | 47UH 56UH 1.5UH 1.5UH 1.5UH |
| D603 D950 | | DIODE 1S 2837 DIODE 1S 2837 | | L209 | 1-410-386-11 | INDUCTOR CHIP | 27UH |
| DL001 | 1-415-342-00 | LAY LINE DELAY LINE, 1H | | L210 L301 L302 L303 | 1-410-388-21 1-408-982-11 1-408-983-21 1-408-948-00 | INDUCTOR CHIP INDUCTOR INDUCTOR INDUCTOR | 39UH 100UH 120UH 220UH |
| DL002 | | DELAY LINE, 1H | | L304 | 1-408-981-21 | I NDUC TOR | 82UH |
| FL101 | FII 1-236-371-11 | LPF, REC (Y) | | L305 L401 L402 | 1-408-968-21 1-408-974-21 1-410-072-21 | INDUCTOR INDUCTOR INDUCTOR | 6.8UH 22UH 820UH |

| No. | Part No. | Description | | Remark | No. | Part No. | Description | | Remark |
|--------------------------------------|--|---|--|--------|--------------------------------------|--|---|-------------------------------------|--------|
| L403 L404 L405 L406 L407 | 1-408-985-21 1-408-968-21 1-408-963-11 1-408-968-21 1-408-973-21 | INDUCTOR INDUCTOR INDUCTOR INDUCTOR INDUCTOR INDUCTOR | 180UH 6.8UH 2.7UH 6.8UH 18UH | | Q111 Q112 Q113 Q114 Q115 | 8-729-901-01 8-729-300-55 8-729-901-01 8-729-901-04 8-729-901-01 | TRANSISTOR 2 TRANSISTOR D TRANSISTOR D | 2S A1122D DTC144EK DTA114EK | |
| L408 L409 L410 L411 L412 | 1-408-989-21 1-408-989-21 1-408-972-21 1-408-973-21 1-408-976-21 | INDUCTOR INDUCTOR INDUCTOR INDUCTOR INDUCTOR INDUCTOR | 470UH 470UH 15UH 18UH 33UH | , | Q116 Q117 Q118 Q119 Q120 | 8-729-102-76 8-729-901-01 8-729-100-66 8-729-100-66 8-729-901-04 | TRANSISTOR D TRANSISTOR 2 TRANSISTOR 2 | DTC144EK 2SC1623 2SC1623 | |
| L413 L414 L415 L418 L501 | 1-408-970-21 1-408-970-21 1-408-968-21 1-408-970-21 1-408-982-11 | | 10UH 10UH 6.8UH 10UH 10UH | | Q121 Q122 Q123 Q124 Q125 | 8-729-100-66 8-729-100-76 8-729-100-66 8-729-100-66 8-729-100-66 | TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 | 2S A812 2S C 1623 2S C 1623 | |
| L531 L532 L533 L534 L601 | 1-408-975-21 | INDUCTOR INDUCTOR INDUCTOR | 150UH 82UH 27UH 8. 2UH 100UH | • | Q126 Q127 Q128 Q129 Q130 | 8-729-100-66 8-729-100-66 8-729-100-66 8-729-100-66 8-729-100-66 | TRANSISTOR 2 | 2S C 1623 2S C 1623 2S C 1623 | |
| L701 L801 L901 | 1 -408-982-11 1 -408-982-11 1 -408-970-21 | INDUCTOR | 100UH 100UH 10UH | | Q131 Q133 Q137 Q151 | | TRANSISTOR D TRANSISTOR D TRANSISTOR D TRANSISTOR 2 | DTA144EK DTC144EK | |
| | VAR | IABLE COIL | | | Q152 | 8-729-100-66 | TRANSISTOR 2 | | |
| L V 201 | | COIL, VARIABLE | 15UH | | Q201 Q202 | 8-729-901-01 8-729-901-01 | TRANSISTOR D | TC144EK | |
| | | NS IS TOR | | | Q203 Q204 | | TRANSISTOR D | TC144EK | |
| Q001 Q002 Q003 | 8-729-901-06 8-729-901-01 | TRANSISTOR DTC TRANSISTOR DTA TRANSISTOR DTC | 144EK | | Q205 Q206 | 8-729-901-06 8-729-100-76 | TRANSISTOR D | | |
| Q004 Q005 | 8-729-901-06 8-729-900-53 | TRANSISTOR DTA TRANSISTOR DTC | 144EK 114EK | | Q207 Q208 Q209 | 8-729-100-66 8-729-100-66 8-729-901-00 | | 2S C 1623 | |
| Q006 Q007 | | TRANSISTOR DTA | | | Q210 | 8-729-901-00 | TRANS IS TOR D | | |
| Q008 Q009 | 8-729-901-01 | TRANSISTOR DTC | | | Q211 | 8-729-100-76 | | | |
| Q010 | 8-729-901-06 8-729-901-01 | TRANSISTOR DTA | | | Q212 Q213 | 8-729-100-76 8-729-901-01 | | | |
| , | | | | | Q214 | 8-729-900-89 | | | |
| Q011 | | TRANSISTOR 2SD | | | Q301 | 8-729-100-66 | TRANSISTOR 2 | 2SC1623 | |
| Q012 <u>/r</u> | | TRANSISTOR 2SB TRANSISTOR DTC | | | Q302 | 8-729-100-66 | TDANCICTOD 2 | 00.01.622 | |
| Q015 | 8 - 729 - 901 - 06 | TRANSISTOR DTA | | | 0302 | 8-729-100-66 | | | |
| Q020 | 8-729-100-76 | TRANSISTOR 2SA | | | Q304 | | TRANSISTOR D | | |
| 0101 | 0 720 001 06 | TRANSISTOR DEA | 1 4 4 5 14 | | Q305 | 8-729-100-66 | | | |
| Q101 Q102 | 8-729-901-06 | TRANSISTOR DTA | | | Q306 | 8-729-100-66 | TRANSISTOR 2 | 201053 | |
| 0103 | 8-729-901-01 | TRANSISTOR DTC | | | Q307 | 8-729-901-01 | TRANS IS TOR D | TC144EK | |
| 0104 | 8-729-901-04 | TRANSISTOR DTA | 114EK | | Q308 | 8-729-901-01 | TRANSISTOR D | TC144EK | |
| Q105 | 8 <i>-</i> 729 <i>-</i> 202-38 | TRANSISTOR 2SC | 3326N | | Q401 | 8-729-100-66 | TRANSISTOR 2 | | |
| Q106 | 8-729-202-38 | TRANSISTOR 2SC | 3326N | | Q402 Q403 | 8-729-100-66 8-729-901-01 | TRANSISTOR 2 TRANSISTOR D | | |
| Q107 | 8-729-100-76 | TRANSISTOR 2SA | | | Q-100 | 0-/23-301 - 01 | וואוני מוחווי | /10174FV | |
| 0108 | 8 -729 -901 -01 | TRANSISTOR DTC | 144EK | | Q404 | 8-729-901-04 | TRANSISTOR D | | |
| Q109 Q110 | 8 - 729 - 901 - 01 | TRANSISTOR DTC | | | Q405 | 8-729-901-01 | TRANSISTOR D | | |
| ULIU | 8 -729 -901-01 | TRANSISTOR DTC | 144CK . | , | Q406 | 8-729-901-06 | TRANSISTOR D | JIAI44EK | |

The components identified by mark \(\frac{\hat{\Lambda}}{\text{ or dotted line with mark}} \) are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque 🛕 sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

VI-57

| No. | Part No. | Description | Remark | , No. | Part No. | Description | | | | Remark |
|--------------------------------------|--|--|--------|--------------------------------------|--|---|----------------------------------|-------------------------------|---|--------|
| Q408 Q409 Q411 Q412 Q413 | 8-729-100-66 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | Q611 Q612 Q613 Q614 Q615 | 8-729-100-66 8-729-100-76 8-729-901-01 | TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR D TRANSISTOR D | S C 1623 S A 812 T C 144EK | | | |
| Q414 Q415 Q416 Q417 Q418 | 8-729-100-66 8-729-901-04 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 TRANSISTOR DTA114EK TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | Q616 Q619 Q701 Q702 Q703 | 8-729-901-01 8-729-100-76 8-729-100-76 | TRANSISTOR D TRANSISTOR D TRANSISTOR 2 TRANSISTOR 2 TRANSISTOR 2 | TC144EK SA812 SA812 | | | |
| Q419 Q420 Q421 Q422 Q423 | 8-729-100-76 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SA812 TRANSISTOR 2SC1623 TRANSISTOR 2SA812 TRANSISTOR 2SA812 | | Q704 Q801 Q802 Q803 Q804 | 8-729-100-76 8-729-100-66 8-729-100-66 8-729-100-66 8-729-100-66 | TRANSISTOR 2 | C1623 C1623 C1623 | | | , |
| Q424 Q425 Q426 Q429 Q430 | 8-729-100-66 8-729-100-76 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 TRANSISTOR 2SA812 TRANSISTOR 2SC1623 TRANSISTOR DTC144EK | | Q805 Q806 Q807 Q808 Q809 | 8-729-100-76 8-729-100-66 8-729-100-66 8-729-100-66 8-729-901-01 | TRANSISTOR 25 | C1623 C1623 C1623 | | | |
| Q431 Q432 Q433 Q435 Q436 | 8-729-901-01 8-729-202-38 8-729-901-01 | TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR 2SC3326N TRANSISTOR DTC144EK TRANSISTOR DTC144EK | | Q810 Q811 Q812 Q813 Q901 | 8-729-100-66 8-729-100-66 8-729-100-76 | TRANSISTOR 25 TRANSISTOR 25 TRANSISTOR 25 TRANSISTOR 25 TRANSISTOR DT | C1623 C1623 A812 | | | |
| Q437 Q501 Q502 Q503 Q504 | 8-729-100-66 8-729-100-66 8-729-100-66 | TRANSISTOR DTC144EK TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 TRANSISTOR DTA144EK | | Q902 Q950 Q951 Q952 Q953 | 8-729-907-46 8-729-100-76 | TRANSISTOR DI TRANSISTOR FM TRANSISTOR IM TRANSISTOR 2S TRANSISTOR DI | IW1 IZ1 A812 | | | |
| Q505 Q506 Q531 | 8-729-312-22 | TRANSISTOR 2SA1122D TRANSISTOR 2SA1122D TRANSISTOR 2SC1623 | | Q954 | 8-729-100-66 | | C1623 | | | |
| Q532 Q533 | 8-729-901-01 | TRANSISTOR DTC144EK TRANSISTOR DTC144EK | | | | ISTOR | | | | |
| Q534 Q535 Q536 Q537 | 8-729-122-63 8-729-100-66 8-729-100-66 | TRANSISTOR DIGITATER TRANSISTOR 2SA1226 TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | R001 R002 R003 R004 R005 | 1-216-097-00 1-216-089-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 100K 47K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| Q538 Q539 Q540 Q541 Q542 | 8-729-100-66 8-729-100-66 8-729-102-08 8-729-102-08 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 TRANSISTOR 2SC2223-F14 TRANSISTOR 2SC2223-F14 TRANSISTOR DTC144EK | | R006 R007 R008 R009 R013 | 1-216-041-00 1-216-065-00 1-216-295-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL CHIP | 470 4.7K | 5% 5% 5% 5% 0.50% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| Q601 Q602 Q603 | 8-729-100-76 | TRANSISTOR 2SAB12 TRANSISTOR 2SC1623 TRANSISTOR 2SAB12 | | R016 | 1 -216 -055 -00 | METAL GLAZE METAL GLAZE | 1.8K | 5% 5% | 1/10W 1/10W | |
| Q604 Q605 Q606 | 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR DTA144EK TRANSISTOR DTC144EK | | R017 R018 | 1-216-073-00 1-216-065-00 | METAL GLAZE METAL GLAZE | 10K 4.7K | 5% 5% 5% | 1/10W 1/10W | |
| Q607 Q608 Q609 | 8-729-901-01 8-729-312-22 8-729-312-22 | TRANSISTOR DTC144EK TRANSISTOR 2SA1122D TRANSISTOR 2SA1122D | | R020 R021 R022 R024 | 1-216-037-00 1-216-037-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 330 330 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | |

| No. | Part No. | Description | | | | Remark | No. | Part No. | Description | | | | Remark |
|--------------------------------------|--|---|----------------------------|--|---|--------|--------------------------------------|--|---|-----------------------------------|----------------------------|---|--------|
| R025 R027 R029 R030 R050 | 1-216-073-00 1-216-295-00 1-216-295-00 1-216-073-00 1-216-295-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 0 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R141 R142 R143 R144 R145 | 1-216-083-00 1-216-081-00 1-216-049-00 1-216-081-00 1-216-748-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 27K 22K 1K 22K 39K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R060 R087 R089 R094 R096 | 1-216-049-00 1-216-073-00 1-216-073-00 1-216-037-00 1-216-032-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 330 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R146 R148 R149 R151 R153 | 1-216-748-11 1-216-044-00 1-216-041-00 1-216-049-00 1-216-057-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 39K 620 470 1K 2.2K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | ÷ |
| R097 R098 R099 R101 R102 | 1-216-043-00 1-216-073-00 1-216-057-00 1-216-113-00 1-216-099-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 2.2K 470K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R154 R155 R156 R157 R158 | 1-216-081-00 1-216-081-00 1-216-101-00 1-216-057-00 1-216-041-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 22K 150K 2.2K 470 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R103 R104 R105 R106 R107 | 1-216-075-00 1-216-081-00 1-216-077-00 1-216-085-00 1-216-109-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 15K 33K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R159 R160 R162 R163 R164 | 1-216-045-00 1-216-040-00 1-216-043-00 1-216-057-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 680 430 560 2.2K 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R108 R109 R110 R111 R112 | 1-216-049-00 1-216-081-00 1-216-081-00 1-216-295-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 22K 0 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R165 R166 R167 R168 R169 | 1-216-073-00 1-216-083-00 1-216-081-00 1-216-043-00 1-216-021-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 27K 22K 560 68 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R113 R114 R115 R116 R117 | 1-216-089-00 1-216-091-00 1-216-083-00 1-216-093-00 1-216-667-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL CHIP | 56K 27K 68K | 5% 5% 5% 5% 0.50% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R170 R171 R172 R173 R174 | 1-216-045-00 1-216-055-00 1-216-049-00 1-216-049-00 1-216-057-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 680 1.8K 1K 1K 2.2K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | · |
| R118 R119 R120 R121 R122 | 1-216-643-11 1-216-641-11 1-216-653-11 1-216-089-00 1-216-663-11 | METAL CHIP METAL CHIP METAL CHIP METAL GLAZE METAL CHIP | 390 1.2K 47K | 0.50% 0.50% 0.50% 5% 0.50% | 1/10W 1/10W 1/10W | | R175 R176 R177 R178 R179 | 1-216-083-00 1-216-059-00 1-216-049-00 1-216-033-00 1-216-034-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 27K 2.7K 1K 220 240 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R123 R124 R125 R126 R127 | 1-216-671-11 1-216-679-11 1-216-065-00 1-216-075-00 1-216-071-00 | METAL CHIP METAL CHIP METAL GLAZE METAL GLAZE METAL GLAZE | 15K 4.7K 12K | 0.50% 0.50% 5% 5% | | | R180 R181 R182 R183 R184 | 1-216-057-00 1-216-043-00 1-216-057-00 1-216-083-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 2.2K 560 2.2K 27K 22K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R128 R129 R130 R131 R132 | 1-216-666-11 1-216-666-11 1-216-103-00 1-216-663-11 1-216-667-11 | METAL CHIP METAL CHIP METAL GLAZE METAL CHIP METAL CHIP | 4.3K (180K ! 3.3K (| 0.50% 0.50% 5% 0.50% 0.50% | 1/10W 1/10W 1/10W | | R185 R186 R187 R188 R189 | 1-216-053-00 1-216-043-00 1-216-031-00 1-216-033-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1.5K 560 180 220 22K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R133 R134 R135 R136 R137 | 1-216-101-00 1-216-645-11 1-216-032-00 1-216-097-00 1-216-073-00 | METAL GLAZE METAL CHIP METAL GLAZE METAL GLAZE METAL GLAZE | 560 (200 ! 100K ! | 0.50% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R190 R191 R192 R193 R194 | 1-216-039-00 1-216-075-00 1-216-081-00 1-216-057-00 1-216-043-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 390 12K 22K 2.2K 560 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R138 R139 R140 | 1-216-653-11 1-216-641-11 1-216-049-00 | METAL CHIP METAL CHIP METAL GLAZE | 390 (| 0.50% 0.50% 5% | | | R195 R196 R197 | 1 -216 -295 -00 1 -216 -295 -00 1 -216 -033 -00 | METAL GLAZE METAL GLAZE METAL GLAZE | 0 0 220 | 5% 5% 5% | 1/10W 1/10W 1/10W | |

VI-57

| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | | Remark |
|--------------------------------------|---|---|---------------------------|--|--------|--------------------------------------|--|---|--------------------------------------|----------------------------|---|--------|
| R198 R199 R201 R202 R203 | 1-216-027-00 1-216-073-00 1-216-033-00 1-216-037-00 1-216-043-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 220 330 | 5% 1/10\ 5% 1/10\ 5% 1/10\ 5% 1/10\ 5% 1/10\ 5% 1/10\ | | R256 R257 R258 R259 R260 | 1-216-081-00 1-216-049-00 1-216-073-00 1-216-081-00 1-216-043-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 1K 10K 22K 560 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R204 R205 R206 R207 R208 | 1-216-081-00 1-216-081-00 1-216-049-00 1-216-063-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 5 1K 5 3.9K 5 | 5% 1/10v 5% 1/10v 5% 1/10v 5% 1/10v 5% 1/10v | ! ! | R261 R262 R263 R264 R265 | 1-216-041-00 1-216-043-00 1-216-041-00 1-216-049-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 470 560 470 1K 1K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | · |
| R209 R210 R211 R213 R214 | 1-216-049-00 1-216-035-00 1-249-431-11 1-216-295-00 1-216-057-00 | METAL GLAZE METAL GLAZE CARBON METAL GLAZE METAL GLAZE | 270 5 15K 5 0 5 | 5% 1/104 5% 1/100 5% 1/4W 5% 1/100 5% 1/100 | | R266 R267 R268 R301 R302 | 1-216-065-00 1-216-057-00 1-216-057-00 1-216-049-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 4.7K 2.2K 2.2K 1K 1K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R216 R217 R218 R219 R220 | 1-216-049-00 1-216-295-00 1-216-065-00 1-216-081-00 1-216-045-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 5 4.7K 5 22K 5 | 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W | | R303 R304 R305 R306 R307 | 1-216-105-00 1-216-039-00 1-216-051-00 1-216-081-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 220K 390 1.2K 22K 1K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R221 R222 R223 R224 R225 | 1-216-043-00 1-216-065-00 1-216-097-00 1-216-075-00 1-216-057-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 4.7K 5 100K 5 12K 5 | 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W | | R308 R309 R310 R311 R312 | 1-216-051-00 1-216-057-00 1-216-063-00 1-216-065-00 1-216-067-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1.2K 2.2K 3.9K 4.7K 5.6K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R226 R227 R228 R229 R230 | 1-216-039-00 1-216-035-00 1-216-748-11 1-216-073-00 1-216-117-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 270 5 39K 5 10K 5 | 5% 1/10w 5% 1/10w 5% 1/10w 5% 1/10w 5% 1/10w | | R313 R314 R315 R316 R317 | 1-216-049-00 1-216-085-00 1-216-085-00 1-216-057-00 1-216-043-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 33K 33K 2.2K 560 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R231 R232 R233 R234 R235 | 1-216-075-00 1-216-081-00 1-216-081-00 1-216-081-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 5 22K 5 22K 5 | 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W | | R318 R319 R320 R321 R322 | 1-216-065-00 1-216-073-00 1-216-089-00 1-216-085-00 1-216-043-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 4.7K 10K 47K 33K 560 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R236 R237 R238 R239 R240 | 1-216-029-00 1-216-027-00 1-216-015-00 1-216-083-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 120 5 39 5 27K 5 | 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W | | R323 R324 R325 R326 R327 | 1-216-043-00 1-216-073-00 1-216-077-00 1-216-041-00 1-216-036-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 560 10K 15K 470 300 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R241 R244 R245 R246 R247 | 1 -216 -065 -00 1 -216 -059 -00 1 -216 -051 -00 1 -216 -121 -00 1 -216 -089 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 2.7K 5 1.2K 5 1M 5 | 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W | ! | R328 R329 R330 R331 R332 | 1-216-041-00 1-216-041-00 1-216-073-00 1-216-077-00 1-216-041-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 470 470 10K 15K 470 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | • |
| R248 R249 R250 R251 R252 | 1-216-067-00 1-216-049-00 1-216-049-00 1-216-041-00 1-216-031-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 5 1K 5 470 5 | 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W | | R333 R401 R402 R403 R404 | 1-216-073-00 1-216-073-00 1-216-029-00 1-216-073-00 1-216-295-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 150 10K 0 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R253 R254 R255 | 1 -216 -041-00 1 -216 -041-00 1 -216 -073-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 470 5 | 5% 1/10W 5% 1/10W 5% 1/10W | | R405 R406 R407 | 1-216-041-00 1-216-035-00 1-216-043-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 470 270 560 | 5% 5% 5% | 1/10W 1/10W 1/10W | |

| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | | Remark |
|--------------------------------------|---|---|---|---|--------|--------------------------------------|--|---|---------------------------------------|----------------------------|---|--------|
| R408 R409 R410 R411 R412 | 1-216-081-00 1-216-081-00 1-216-041-00 1-216-045-00 1-216-041-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 5% 22K 5% 470 5% 680 5% 470 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R463 R464 R465 R468 R469 | 1-216-081-00 1-216-073-00 1-216-073-00 1-216-089-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 10K 10K 47K 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R414 R415 R416 R417 R418 | 1-216-043-00 1-216-039-00 1-216-073-00 1-216-049-00 1-216-057-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 560 5% 390 5% 10K 5% 1K 5% 2.2K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R472 R476 R478 R479 R486 | 1-216-043-00 1-216-089-00 1-216-085-00 1-216-073-00 1-216-041-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 560 47K 33K 10K 470 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R419 R420 R421 R422 R423 | 1 -216 -073 -00 1 -216 -033 -00 1 -216 -049 -00 1 -216 -045 -00 1 -216 -033 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 5% 220 5% 1K 5% 680 5% 220 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R487 R490 R501 R502 R503 | 1-216-041-00 1-216-089-00 1-216-043-00 1-216-295-00 1-216-065-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 470 47K 560 0 4.7K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R424 R425 R426 R427 R428 | 1-216-295-00 1-216-075-00 1-216-748-11 1-216-041-00 1-216-037-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 5% 12K 5% 39K 5% 470 5% 330 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R504 R505 R507 R508 R510 | 1-216-035-00 1-216-033-00 1-216-053-00 1-216-057-00 1-216-069-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 270 220 1.5K 2.2K 6.8K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R429 R431 R432 R433 R434 | 1 -216 -035 -00 1 -216 -081 -00 1 -216 -081 -00 1 -216 -049 -00 1 -216 -049 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 270 5% 22K 5% 22K 5% 1K 5% 1K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R511 R512 R513 R514 R515 | 1-216-049-00 1-216-041-00 1-216-069-00 1-216-041-00 1-216-047-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 470 6.8K 470 820 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R435 R436 R437 R438 R439 | 1 -216 -073 -00 1 -216 -049 -00 1 -216 -073 -00 1 -216 -069 -00 1 -216 -083 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 5% 1K 5% 10K 5% 6.8K 5% 27K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R517 R518 R519 R520 R531 | 1-216-089-00 1-216-089-00 1-216-089-00 1-216-089-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 47K 47K 47K 47K 1K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R440 R441 R442 R443 R444 | 1 -216 -295 -00 1 -216 -081 -00 1 -216 -047 -00 1 -216 -029 -00 1 -216 -051 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 5% 22K 5% 820 5% 150 5% 1.2K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R532 R533 R534 R535 R536 | 1-216-043-00 1-216-035-00 1-216-059-00 1-216-043-00 1-216-079-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 560 270 2.7K 560 18K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R445 R446 R447 R448 R449 | 1-216-081-00 1-216-081-00 1-216-045-00 1-216-052-00 1-216-085-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 5% 22K 5% 680 5% 1.3K 5% 33K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R537 R538 R540 R542 R543 | 1-216-049-00 1-216-073-00 1-216-073-00 1-216-049-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 10K 10K 1K 22K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R450 R451 R452 R453 R454 | 1 -216 -079 -00 1 -216 -085 -00 1 -216 -069 -00 1 -216 -073 -00 1 -216 -073 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 18K 5% 33K 5% 6.8K 5% 10K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R544 R545 R546 R547 R548 | 1-216-081-00 1-216-041-00 1-216-049-00 1-216-041-00 1-216-041-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 470 1K 470 470 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R455 R456 R457 R458 R459 | 1-216-085-00 1-216-081-00 1-216-043-00 1-216-047-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 33K 5% 22K 5% 560 5% 820 5% 1K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R549 R550 R551 R552 R553 | 1-216-295-00 1-216-041-00 1-216-041-00 1-216-065-00 1-216-083-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 470 470 4.7K 27K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R460 R461 R462 | 1 -216 -077 -00 1 -216 -051 -00 1 -216 -051 -00 | METAL GLAZE METAL GLAZE METAL GLAZE | 15K 5% 1.2K 5% 1.2K 5% | 1/10W 1/10W 1/10W | | R554 R555 R556 | 1-216-081-00 1-216-046-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 22K 750 10K | 5% 5% 5% | 1/10W 1/10W 1/10W | |

VI-57

| No. | Part No. | Description | | | | Remark | No. | Part No. | Description | | | | Remark |
|--------------------------------------|---|---|-------------------------------------|----------------------------|---|--------|--------------------------------------|--|---|------------------------------------|----------------------------|---|--------|
| R558 R560 R601 R602 R603 | 1-216-073-00 1-216-059-00 1-216-057-00 1-216-065-00 1-216-748-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 2.7K 2.2K 4.7K 39K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R711 R712 R777 R802 R803 | 1-216-043-00 1-216-043-00 1-216-295-00 1-216-025-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 560 560 0 100 22K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R604 R605 R606 R607 R608 | 1-216-075-00 1-216-081-00 1-216-097-00 1-216-055-00 1-216-059-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 12K 22K 100K 1.8K 2.7K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R804 R805 R806 R807 R808 | 1-216-081-00 1-216-053-00 1-216-067-00 1-216-073-00 1-216-065-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 1.5K 5.6K 10K 4.7K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R609 R610 R611 R612 R613 | 1-216-059-00 1-216-111-00 1-216-061-00 1-216-041-00 1-216-069-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 2.7K 390K 3.3K 470 6.8K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R809 R810 R811 R812 R813 | 1-216-045-00 1-216-045-00 1-216-029-00 1-216-060-00 1-216-045-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 680 680 150 3K 680 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R614 R615 R616 R617 R618 | 1-216-073-00 1-216-073-00 1-216-077-00 1-216-041-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 15K 470 22K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R814 R815 R816 R817 R818 | 1-216-073-00 1-216-049-00 1-216-065-00 1-216-049-00 1-216-071-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 1K 4.7K 1K 8.2K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R619 R620 R622 R623 R624 | 1-216-057-00 1-216-041-00 1-216-083-00 1-216-047-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 470 27K 820 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R819 R820 R821 R822 R823 | 1-216-081-00 1-216-071-00 1-216-081-00 1-216-049-00 1-216-045-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 8.2K 22K 1K 680 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R625 R626 R627 R628 R629 | 1-216-039-00 1-216-049-00 1-216-073-00 1-216-073-00 1-216-033-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R824 R825 R826 R827 R828 | 1-216-073-00 1-216-027-00 1-216-045-00 1-216-073-00 1-216-053-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 120 680 10K 1.5K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R640 R641 R642 R643 R654 | 1-216-089-00 1-216-089-00 1-216-089-00 1-216-089-00 1-216-059-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 47K 47K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R829 R834 R835 R836 R837 | 1-216-073-00 1-216-073-00 1-216-033-00 1-216-032-00 1-216-041-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 220 200 470 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R655 R656 R657 R658 R659 | 1-216-045-00 1-216-053-00 1-216-049-00 1-216-051-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1.5K 1K 1.2K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R838 R839 R840 R841 R843 | 1-216-073-00 1-216-041-00 1-216-077-00 1-216-057-00 1-216-043-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 470 15K 2.2K 560 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R660 R661 R662 R665 R666 | 1 -216 -097 -00 1 -216 -081 -00 1 -216 -295 -00 1 -216 -091 -00 1 -216 -091 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 0 56K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R844 R845 R846 R901 R902 | 1-216-295-00 1-216-030-00 1-216-051-00 1-216-081-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 160 1.2K 22K 1K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R667 R695 R705 R706 R707 | 1-216-057-00 1-216-063-00 1-216-043-00 1-216-043-00 1-216-043-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 3.9K 560 560 | 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R903 R904 R931 R950 R952 | 1-216-069-00 1-216-069-00 1-216-049-00 1-216-085-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 6.8K 6.8K 1K 33K 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R708 R709 R710 | 1 -216 -043 -00 1 -216 -043 -00 1 -216 -043 -00 | METAL GLAZE METAL GLAZE METAL GLAZE | 560 | 5% 5% 5% | 1/10W 1/10W 1/10W | | R953 R954 R955 | 1-216-067-00 1-216-055-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 5.6K 1.8K 10K | 5% 5% 5% | 1/10W 1/10W 1/10W | |

| No. | Part No. | Description | Remark | , No. | Part No. | Description | | | Remark |
|--------------------------------------|--|---|------------|--------------------------------------|--|---------------------------------------|-------------------------|-------------------------|---------------------------------|
| R956 R957 R958 R959 R960 | 1-216-065-00 1-216-081-00 1-216-065-00 1-216-065-00 1-216-083-00 | METAL GLAZE 22K 5% 1/10W METAL GLAZE 4.7K 5% 1/10W | | C210 C211 C212 C213 C214 | 1-163-021-00 1-124-234-00 1-126-157-11 1-163-038-00 | CERAMIC CHIP | 22MF 10MF 0.1MF | 20% 20% 5% | 50V 16V 16V 25V 50V |
| R961 R962 R963 R964 | 1-216-071-00 1-216-037-00 1-216-069-00 1-216-061-00 | METAL GLAZE 8.2K 5% 1/10W METAL GLAZE 330 5% 1/10W METAL GLAZE 6.8K 5% 1/10W METAL GLAZE 3.3K 5% 1/10W IABLE RESISTOR | | C215 C216 C217 C218 C219 | 1-163-127-00 1-126-157-11 1-126-157-11 1-163-033-00 1-124-589-11 | ELECT | 10MF 10MF | 5% 20% 20% 20% | 50V 16V 16V 50V 16V |
| | | | | C220 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| RV102 RV107 RV108 | 1-228-993-00 1-228-994-00 1-228-994-00 1-228-989-00 1-228-994-00 | | | C221 C222 C223 C224 | 1-126-157-11 | ELECT CERAMIC CHIP CERAMIC CHIP | 10MF 0.033MF 39PF | 20% 5% | 16V 50V 50V 50V |
| RV110 | 1-228-998-00 | RES, ADJ, CARBON 220K | | C225 | 1-124-234-00 | | 22MF | 20% | 16V |
| RV201 | 1-228-994-00 | RES, ADJ, CARBON 10K | | C226 C227 | 1-124-589-11 1-163-035-00 | | 47MF 0.047MF | 20% | 16V 50V |
| | 1-228-994-00 1-228-990-00 | RES, ADJ, CARBON 10K RES, ADJ, CARBON 1K | | C228 C229 | 1-126-157-11 1-126-157-11 | | 10MF 10MF | 20% 20% | 16V 16V |
| | 1-228-989-00 | RES, ADJ, CARBON 470 | | | | | | 20% | |
| RV503 | 1-228-990-00 | RES, ADJ, CARBON 1K | | C231 C232 | 1-163-038-00 1-163-038-00 | | | | 25V 25V |
| RV601 | 1-228-991-00 | RES. ADJ. CARBON 2.2K | | C233 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50 V |
| RV602 | 1-228-991-00 1-228-996-00 | RES, ADJ, CARBON 2.2K RES. ADJ. CARBON 47K | | C234 C235 | 1-163-105-00 1-163-105-00 | CERAMIC CHIP | | 5% 5% | 50V 50V |
| RV605 | 1-228-993-00 | RES, ADJ, CARBON 4.7K | | | 1-103-103-00 | CERAPITE CHIP | 3377 | 3% | 201 |
| RV950 | 1-228-994-00 | RES, ADJ, METAL GLAZE 10K | | C236 C237 | 1-163-035-00 1-163-021-00 | | | | 50V 50V |
| | | | | C238 | 1-126-157-11 | ELECT | 10MF | 20% | 16V |
| | IRA | NSFORMER | | C239 C240 | 1-163-035-00 1-124-589-11 | CERAMIC CHIP | 0.047MF 47MF | 20% | 50V 16V |
| T301 | 1-409-396-11 | REC C TRAP | | | | | | 20% | |
| | CON | NECTOR | İ | C241 C242 | 1-163-035-00 1-126-157-11 | | 0.04/MF 10MF | 20% | 50V 16V |
| | | | | C243 | 1-163-021-00 | | | | 50V |
| W002 | *1-563-536-11 | CONNECTOR, BOARD TO BOARD 18P | | C244 C245 | 1-124-234-00 1-126-157-11 | ELECT ELECT | 22MF 10MF | 20% 20% | 16V 16V |
| | CRY | STAL | | C246 | 1-163-127-00 | CEDAMIC CUID | 270DE | 5% | 50V |
| V001 | | | | C247 | 1 -163 -127 -00 | CERAMIC CHIP | 270PF | 5% | 50V |
| X201 | 1-56/-412-11 | VIBRATOR, CRYSTAL (10.7MHz) | | C248 C249 | 1-163-035-00 1-126-157-11 | CERAMIC CHIP | 0.047MF 10MF | 20% | 50V 16V |
| ***** | ******** | ********* | ***** | C250 | | CERAMIC CHIP | | 20% | 50V |
| | *A-7061-372-B | JG-11 BOARD, COMPLETE | | C251 C252 | 1-124-589-11 1-163-035-00 | CERAMIC CHIP | | 20% | 16V 50 V |
| | CAPA | ACITOR | | C253 C254 | 1-163-021-00 1-126-094-11 | | 0.01MF 4.7MF | 20% | 50V 25V |
| C201 | 1-163-035-00 | CERAMIC CHIP 0.047MF | 50V | C255 | 1-163-009-11 | | | 10% | 50V |
| C202 | 1-163-105-00 | CERAMIC CHIP 33PF 5% | 50V 50V | C256 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C203 C204 | 1-163-105-00 1-163-021-00 | CERAMIC CHIP 33PF 5% | 50V 50V | C257 C258 | 1-163-093-00 1-163-021-00 | CERAMIC CHIP | 10PF | 5% | 50 V |
| C205 | 1-126-157-11 | | 167 | C259 | 1-163-021-00 | CERAMIC CHIP | | | 50V 50V |
| C206 | 1-163-035-00 | CERAMIC CHIP 0.047MF | 50V | C261 | 1-163-038-00 | CERAMIC CHIP | | | 25 V |
| C207 | 1-126-154-11 | ELECT 47MF 20% | 6.30 | C262 | | CERAMIC CHIP | 0.1MF | | 25V |
| C208 C209 | 1-163-035-00 1-126-157-11 | | 50V 16V | C263 C264 | | | 47MF 47MF | 20% 20% | 6.3V 16V |
| | | | | OLU-T | - 164-303-11 | LLLOI | 7710 | LU10 | 101 |

JG-11

| No. | Part No. | Description | | Remark | No. | Part No. | Description | | | | Remark |
|--------------|--|--|-----|------------|------------------------------|------------------------------|--|--------------|------------|----------------|--------|
| C266 C267 | 1-163-038-00 1-164-161-11 FIL | CERAMIC CHIP 0.1MF CERAMIC CHIP 0.0022MF TER | 10% | 25V 50V | Q213 Q214 Q215 Q216 | 8-729-100-76 8-729-100-76 | TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S | A812 A812 | | | |
| CF201 | | FILTER, CERAMIC | | | Q217 | | TRANSISTOR 2S | | | | |
| | | CERAMIC TRAP (4.5MHZ) | | | Q219 | | TRANSISTOR 2S | | | | |
| | CON | FILTER, CERAMIC CERAMIC TRAP (4.5MHZ) NECTOR | | | Q221 Q222 | 8-729-100-76 | TRANSISTOR 2S | A812 | | | |
| CN202 | 1-506-473-11 | PIN, CONNECTOR 4P PIN, CONNECTOR 8P PIN, CONNECTOR 10P | | | Q223 Q224 Q225 | 8-729-900-98 | TRANSISTOR 2S TRANSISTOR DT TRANSISTOR 2S | C143TK | | | |
| 5255 | DIO | | | | Q226 | | TRANSISTOR DT | | | | |
| D201 | 8-719-100-05 | | | | | RES | IS TOR | | | | |
| D203 D204 | 8-719-100-05 8-719-100-05 8-719-100-05 | DIODE 1S 2837 | | | R201 | 1-216-049-00 | | 1K | 5% 5% | 1/10W | |
| B204 | | nione 125021 | | | R202 R203 | | METAL GLAZE | 1K 100K | 5% 5% | 1/10W 1/10W | |
| | <u>IC</u> | to aw took | | 1 | R205 R206 | 1-216-113-00 1-216-129-00 | | 470K 2.2M | 5% 5% | 1/10W 1/10W | |
| IC202 | 8-752-322-24 8-752-322-24 | IC CXL1008M | | İ | R207 | | METAL GLAZE | 2.2M | 5% | 1/10W | |
| IC204 | 8-759-207-38 8-759-941-68 | IC BA7131F | | | R208 R209 | 1-216-105-00 1-216-073-00 | METAL GLAZE METAL GLAZE | 220K 10K | 5% 5% | 1/10W 1/10W | |
| IC205 | 8-759-941-68 | IC BA7131F | | ļ | R210 R211 | | METAL GLAZE METAL GLAZE | 220K 2.2K | 5% 5% | 1/10W 1/10W | |
| | <u>C011</u> | <u>_</u> | | | R212 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| L201 L202 | 1-408-980-21 1-408-982-11 | | | | R213 R214 | 1 -216 -027 -00 | METAL GLAZE METAL GLAZE | 120 1K | 5% 5% | 1/10W 1/10W | |
| L203 L204 | 1-408-982-11 1-408-970-21 | INDUCTOR 100UH | | | R215 R216 | 1-216-065-00 1-216-073-00 | METAL GLAZE METAL GLAZE | 4.7K 10K | 5% 5% | 1/10W 1/10W | |
| L205 | 1-408-982-11 | | | | R217 | 1-216-039-00 | | 390 | 5% | 1/10W | |
| L206 L207 | 1-408-980-21 | INDUCTOR 68UH INDUCTOR CHIP 10UH | | | R218 | 1-216-033-00 | METAL GLAZE | 220 | 5% 5% | 1/10W 1/10W | |
| L208 | 1-408-982-11 | INDUCTOR 100UH | | | R219 R220 | 1-216-039-00 1-216-079-00 | METAL GLAZE METAL GLAZE | 390 18K | 5 % | 1/10W | |
| L209 L210 | 1-408-970-21 1-408-982-11 | INDUCTOR 100H INDUCTOR 100UH | | | R221 | 1-216-071-00 | METAL GLAZE | 8. 2K | 5% | 1/10W | |
| L211 | 1-408-971-21 | INDUCTOR 12UH | | | R222 R223 | 1-216-055-00 1-216-121-00 | METAL GLAZE METAL GLAZE | 1.8K 1M | 5% 5% | 1/10W 1/10W | |
| L212 L213 | 1-408-978-21 1-408-982-11 | | | | R225 R226 | 1-216-043-00 1-216-053-00 | METAL GLAZE METAL GLAZE | 560 1.5K | 5% 5% | 1/10W 1/10W | |
| L214 | 1-410-377-11 | INDUCTOR CHIP 4.7UH | | | R227 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| | - TRA | NS IS TOR | | | R228 R229 | 1-216-075-00 1-216-081-00 | METAL GLAZE METAL GLAZE | 12K 22K | 5% 5% | 1/10W 1/10W | |
| Q201 Q202 | | TRANSISTOR 2SA812 TRANSISTOR 2SA812 | | | R230 R231 | 1-216-089-00 1-216-025-00 | METAL GLAZE METAL GLAZE | 47K 100 | 5% 5% | 1/10W 1/10W | |
| 0203 0204 | 8-729-100-76 | TRANSISTOR 2SA812 TRANSISTOR 2SA812 | | | R232 | 1-216-073-00 | | 10K | 5% | 1/10W | |
| Q205 | 8-729-100-76 | TRANSISTOR 2SA812 | | | R233 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| Q206 Q207 | | TRANSISTOR DTC144EK | | | R234 R235 | 1-216-025-00 1-216-033-00 | METAL GLAZE METAL GLAZE | 100 220 | 5% 5% | 1/10W 1/10W | |
| Q208 | 8-729-901-01 8-729-100-76 | TRANSISTOR DTC144EK TRANSISTOR 2SA812 | | | R236 R237 | 1-216-073-00 1-216-043-00 | METAL GLAZE METAL GLAZE | 10K 560 | 5% 5% | 1/10W 1/10W | |
| Q209 Q210 | 8-729-100-66 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | | R238 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| Q211 | | TRANSISTOR 2SC1623 | | | R239 R240 | 1-216-033-00 1-216-039-00 | METAL GLAZE METAL GLAZE | 220 390 | 5% 5% | 1/10W 1/10W | |
| Q212 | 8-729-100-66 | TRANSISTOR 2SC1623 | | 1 | R241 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |

JG-11 CH-44

| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | Remark |
|--------------------------------------|--|---|---|-------------------------|--------|--------------------------------------|--|--|----------------------------|-----------------------------|---------------------------------|
| R242 R243 R244 R245 R246 | 1-216-043-00 1-216-048-00 1-216-073-00 1-216-073-00 1-216-077-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 560 5% 910 5% 10K 5% 10K 5% 15K 5% | 1/10W 1/10W 1/10W | | RV202 | VAR 1-228-991-00 1-228-991-00 | RES, ADJ, CA | RBON 2.2K RBON 2.2K | | |
| R247 R248 R249 R250 R251 | 1-216-049-00 1-216-097-00 1-216-081-00 1-216-081-00 1-216-105-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 5% 100K 5% 22K 5% 22K 5% 220K 5% | 1/10W 1/10W 1/10W | | | *A-7061-373-A | | , COMPLETE | ***** | ******** |
| R252 R253 R254 R255 R256 | 1-216-073-00 1-216-081-00 1-216-073-00 1-216-105-00 1-216-057-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 5% 22K 5% 10K 5% 220K 5% 2.2K 5% | 1/10W 1/10W 1/10W | | C001 C002 C003 C004 C005 | 1-163-098-00 1-163-009-11 1-163-109-00 1-163-129-00 1-163-129-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.001MF 47PF 330PF | 5% 10% 5% 5% 5% | 50V 50V 50V 50V 50V |
| R257 R258 R259 R260 R261 | 1-216-027-00 1-216-073-00 1-216-065-00 1-216-039-00 1-216-033-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 120 5% 10K 5% 4.7K 5% 390 5% 220 5% | 1/10W 1/10W 1/10W | | C006 C007 C008 C009 C010 | 1-163-021-00 1-163-063-00 1-131-358-00 1-126-094-11 1-135-149-21 | CERAMIC CHIP CERAMIC CHIP TANTALUM ELECT TANTAL. CHIP | 0.022MF 6.8MF 4.7MF | 10% 20% 20% | 50V 50V 25V 35V 10V |
| R262 R263 R264 R265 R266 | 1-216-039-00 1-216-071-00 1-216-079-00 1-216-055-00 1-216-119-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 390 5% 8.2K 5% 18K 5% 1.8K 5% 820K 5% | 1/10W 1/10W 1/10W | | C011 C012 C013 C014 C016 | 1-163-021-00 1-163-021-00 1-163-075-00 1-126-157-11 1-216-295-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP ELECT METAL GLAZE | 0.01MF | 20% 1/10W | 50V 50V 50V 16V |
| R267 R268 R269 R270 R271 | 1-216-121-00 1-216-049-00 1-216-025-00 1-216-025-00 1-216-025-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1M 5% 1K 5% 100 5% 100 5% 100 5% | 1/10W 1/10W 1/10W | | C017 C018 C019 C020 C021 | 1-124-257-00 1-135-072-21 1-163-205-00 1-163-076-00 1-124-257-00 | ELECT TANTAL. CHIP CERAMIC CHIP CERAMIC CHIP ELECT | 0.001MF | 20% 20% 10% 20% | 50V 35V 50V 50V |
| R272 R273 R274 R275 R276 | 1-216-049-00 1-216-025-00 1-216-037-00 1-216-045-00 1-216-059-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 5% 100 5% 330 5% 680 5% 2.7K 5% | 1/10W 1/10W 1/10W | | C022 C023 C024 C025 C026 | 1-124-257-00 1-163-009-11 1-163-129-00 1-163-035-00 1-163-117-00 | ELECT CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 330PF 0.047MF | 20% 10% 5% | 50V 50V 50V 50V 50V |
| R277 R278 R279 R280 R281 | 1-216-035-00 1-216-038-00 1-216-037-00 1-216-037-00 1-216-067-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 270 5% 360 5% 330 5% 330 5% 5.6K 5% | 1/10W 1/10W 1/10W | | C027 C028 C029 C031 C032 | 1-163-009-11 1-126-157-11 1-163-021-00 1-163-021-00 1-163-129-00 | CERAMIC CHIP ELECT CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 10MF 0.01MF 0.01MF | 10% 20% 5% | 50V 16V 50V 50V 50V |
| R282 R283 R284 R287 R288 | 1-216-081-00 1-216-083-00 1-216-295-00 1-216-051-00 1-216-073-00 | | 22K 5% 27K 5% 0 5% 1.2K 5% 10K 5% | 1/10W | | C034 C035 C036 C037 C038 | 1-163-104-00 1-163-125-00 1-163-129-00 1-163-129-00 1-124-463-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP ELECT | 220PF 330PF | 5% 5% 5% 5% 20% | 50V 50V 50V 50V 50V |
| R290 R291 R292 R293 R294 | 1-216-089-00 1-216-073-00 1-216-049-00 1-216-049-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 5% 10K 5% 1K 5% 1K 5% 1K 5% | 1/10W 1/10W 1/10W | | C039 C040 | | CERAMIC CHIP | | 20% | 50V 50V |
| R295 | 1-216-049-00 | METAL GLAZE | 1K 5% | 1/10W | | CAOOT | 1-141-227-00 | CAR, CEKAMIC | IKIMMEK 20F | Г | |

CH-44 YC-56

| No. | Part No. | Description | | | | Remark | <u> No.</u> | Part No. | Description | | | Remark |
|--------------|------------------------------------|----------------------------|--------------|---------|----------------|--------|--------------|------------------------------|------------------------------|------------------|----------------|--------------|
| | <u>IC</u> | | | | | | | *A-7061-374-A | YC-56 BOARD | | | |
| IC001 | | IC CX20032 | | | | | | | | | | |
| 10002 | 8-759-924-94 | IC CX22021 | | | | | | CAP | ACITOR | | | |
| | <u>CO1</u> | <u>L</u> | | | | | C001 C002 | 1-163-035-00 1-124-638-11 | | 0.047MF 22MF | 20% | 50V 6.3V |
| L001 | 1-408-976-21 | | 33UH | | | | C003 | 1-126-157-11 | ELECT | 10MF | 20% | 167 |
| L002 L003 | 1-408-985-21 1-408-981-21 | | 180U 82UH | Н | | | C004 C005 | 1-163-021-00 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP | | | 50V 50V |
| L004 | 1-408-968-21 | | 6.801 | H | | | | | | | | |
| | RES | ISTOR | | | | | C006 C007 | 1-124-638-11 1-124-638-11 | | 22MF 22MF | 20% 20% | 6.3V 6.3V |
| R002 | 1 -216 -295 -00 | METAL GLAZE | 0 | Ew 1 | 1 /1 OU | | C008 | 1-163-106-00 | | | 5% | 50V |
| R002 | 1-216-073-00 | METAL GLAZE | 0 10K | | 1/10W 1/10W | | C009 C010 | 1-163-107-00 1-163-111-00 | | | 5% 5% | 50V 50V |
| R004 R005 | 1-216-053-00 1-216-065-00 | | 1.5K 4.7K | | 1/10W 1/10W | | C011 | 1-124-635-00 | ELECT | 220MF | 20% | 6.3V |
| R006 | 1-216-075-00 | | 12K | | 1/10W | | C012 | 1-124-638-11 | ELECT | 22MF | 20% | 6.3V |
| R007 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% 1 | 1/10W | | CO13 CO14 | 1-163-129-00 | | | 5% 5* | 50V 50V |
| R008 | 1-216-065-00 | METAL GLAZE | | 5% | 1/10W | | CO14 | 1-163-115-00 1-163-115-00 | | | 5% 5% | 50V 50V |
| R009 R010 | 1 -216 -025 -00 1 -216 -081 -00 | METAL GLAZE METAL GLAZE | 100 22K | | 1/10W 1/10W | | C016 | 1-126-154-11 | FIECT | 47MF | 20% | 6.3V |
| R011 | 1-216-097-00 | METAL GLAZE | 100K | | 1/10W | | CO19 | 1-126-154-11 | | 47MF | 20% | 6.3V |
| R012 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% 1 | 1/10W | | C020 C021 | 1-124-638-11 1-163-035-00 | ELECT | 22MF | 20% | 6.3V 50V |
| R013 | 1-216-073-00 | METAL GLAZE | 10K | | 1/10W | | C022 | 1-163-125-00 | | | 5% | 50V 50V |
| R015 R016 | 1 -216 -081 -00 1 -216 -081 -00 | METAL GLAZE METAL GLAZE | 22K 22K | | 1/10W 1/10W | | C023 | 1-163-021-00 | CEDAMIC CUID | 0.01ME | | 50V |
| R017 | 1-216-043-00 | METAL GLAZE | 560 | | 1/10W | | C024 | 1-163-021-00 | CERAMIC CHIP | | | 50V |
| R018 | 1-216-043-00 | METAL GLAZE | 560 | 5% 1 | L/10W | | C025 C026 | 1-163-075-00 1-163-097-00 | CERAMIC CHIP | | r _w | 50V |
| R019 | 1-216-073-00 | METAL GLAZE | 10K | | 1/10W | | CO27 | 1-163-021-00 | CERAMIC CHIP | | 5% | 50V 50V |
| R020 R021 | 1 -216 -027 -00 1 -216 -073 -00 | METAL GLAZE METAL GLAZE | 120 10K | | L/10W L/10W | | C028 | 1-163-021-00 | CERAMIC CHIP | 0.01ME | | 50V |
| R022 | 1-216-081-00 | METAL GLAZE | 22K | | L/10W | | C029 | 1-126-094-11 | ELECT | 4.7MF | 20% | 25V |
| R023 | 1 -216 -067 -00 | METAL GLAZE | 5.6K | 5% 1 | L/10W | | CO30 CO31 | 1-163-117-00 1-163-035-00 | CERAMIC CHIP CERAMIC CHIP | | 5% | 50V 50V |
| R024 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% 1 | 1/10W | | C032 | 1-163-021-00 | CERAMIC CHIP | | | 50 V |
| R026 R029 | 1-216-073-00 1-216-103-00 | METAL GLAZE METAL GLAZE | 10K 180K | | l/10W l/10W | | C033 | 1-163-021-00 | CERAMIC CHIP | 0.01MF | | 50V |
| R030 | 1 -216 -065 -00 | | 4.7K | | 1/10W | | C034 | 1-163-021-00 | CERAMIC CHIP | 0.01MF | | 500 |
| | VAR | IABLE RESISTOR | | | | | CO35 CO36 | 1-163-035-00 1-126-094-11 | CERAMIC CHIP ELECT | 0.04/MF 4.7MF | 20% | 50V 25V |
| RV001 | | RES, ADJ, SOL | • | | | | C037 | 1-163-119-00 | CERAMIC CHIP | | 5% | 50V |
| | 1-230-523-11 | RES, ADJ, SOL | ID 22K | | | | C038 | 1-163-021-00 | CERAMIC CHIP | 0.01MF | | 507 |
| | TRA | NS FORMER | | | | | CO39 CO40 | 1-163-035-00 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP | | | 50V 50V |
| | | | | | | | CO41 | 1-163-021-00 | CERAMIC CHIP | 0.01MF | | 50 V |
| T001 | 1-409-386-11 | C E TRAP | | | | | C042 | 1-163-021-00 | CERAMIC CHIP | 0.01MF | | 507 |
| | CRY | STAL | | | | | C043 | 1-163-021-00 | | | | 50V |
| X001 | 1-567-505-11 | OSCILLATOR, C | RYSTAL | (4.43MH | lz) | | CO44 CO45 | 1-163-035-00 1-126-154-11 | CERAMIC CHIP | 0.047MF 47MF | 20% | 50V 6.3V |
| ***** | ***** | | | • | • | ***** | C046 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | ,- | 50 V |
| | | | | | | | C047 | 1-163-035-00 | CERAMIC CHIP | U• U4 /MF | | 50V |
| | | | | | | | C048 | 1-163-035-00 | CERAMIC CHIP | | E ov | 50V |
| | | | | | | | CO49 CO50 | 1-163-099-00 1-163-099-00 | CERAMIC CHIP | | 5% 5% | 50V 50V |
| | | | | | | ! | C051 | 1-163-035-00 | CERAMIC CHIP | | | 50V |

| No. | Part No. | Description | Remark | No. | Part No. | Description | | | | Remark |
|--------------------------------------|--|--|--------|--------------------------------------|--|---|-----------------------------------|----------------------------|---|--------|
| D001 | | <u>DE</u> DIODE 1SS123 AY LINE | | Q023 Q024 Q025 Q026 Q027 | 8-729-100-66 8-729-100-66 8-729-100-66 8-729-100-66 8-729-100-66 | TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S | C1623 C1623 C1623 | | | |
| | | DELAY LINE, 1H DELAY LINE, 1H | | Q028 | 8-729-100-66 | TRANSISTOR 2S | C1623 | | | |
| | <u>1C</u> | | | | RES | IS TOR | | | | |
| IC001 IC002 | 8-759-030-34 8-759-030-34 | | | R001 R002 R003 R004 | 1-216-031-00 1-216-081-00 | METAL GLAZE METAL GLAZE | 22K 12K 180 22K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | |
| | <u>C01</u> | _ | : | R005 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| L001 L002 L003 L004 L005 | 1-408-972-21 1-408-979-21 1-408-973-21 1-408-974-21 1-408-976-21 | INDUCTOR 56UH INDUCTOR 18UH INDUCTOR 22UH | | R006 R007 R008 R009 R010 | 1-216-043-00 1-216-043-00 1-216-043-00 1-216-043-00 1-216-043-00 | | 560 560 560 560 560 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| L006 L008 L009 L010 L011 | 1-408-970-21 1-408-984-21 1-408-972-21 1-408-973-21 1-408-972-21 | INDUCTOR 150UH INDUCTOR 15UH INDUCTOR 18UH | | R011 R012 R013 R014 R015 | 1-216-043-00 1-216-051-00 1-216-052-00 1-216-075-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 560 1.2K 1.3K 12K 22K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| L012 | 1-408-977-21 | INDUCTOR 39UH | | R016 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| | VAR | IABLE COIL | | R017 R018 | 1-216-075-00 | METAL GLAZE METAL GLAZE | 1.8K 12K | 5% 5% | 1/10W 1/10W | |
| LV001 LV002 | 1-408-520-00 1-408-520-00 | COIL, VARIABLE 15UH COIL, VARIABLE 15UH | | R019 R020 | 1-216-081-00 1-216-049-00 | METAL GLAZE METAL GLAZE | 22K 1K | 5% 5% | 1/10W 1/10W | |
| | | NS ISTOR | | R021 R022 | 1-216-295-00 1-216-053-00 | | 0 1.5K | 5% 5% | 1/10W 1/10W | |
| Q001 Q002 Q003 | 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | R023 R024 R025 | 1-216-041-00 1-216-049-00 1-216-645-11 | | 470 1K 560 | 5% 5% 0.50% | 1/10W 1/10W 1/10W | |
| Q004 Q005 | | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | R026 R027 | 1-216-645-11 1-216-065-00 | METAL CHIP METAL GLAZE | 560 4.7K | 0.50% 5% | 1/10W 1/10W | |
| 0006 | | TRANSISTOR 2SA812 | | R028 R029 | 1-216-073-00 1-216-047-00 | METAL GLAZE METAL GLAZE | 10K 820 | 5% 5% | 1/10W 1/10W | |
| Q007 Q008 Q009 | 8-729-100-76 | TRANSISTOR 2SA812 TRANSISTOR 2SA812 TRANSISTOR 2SC1623 | * | R030 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| Q010 | 8-729-100-66 | TRANSISTOR 25C1623 | · | R031 R032 R033 | 1-216-041-00 1-216-049-00 1-216-037-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 470 1K | 5% 5% | 1/10W 1/10W | |
| Q011 Q012 | | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | R034 R035 | 1-216-031-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 330 180 220 | 5% 5% 5% | 1/10W 1/10W 1/10W | |
| Q013 Q014 | 8-729-100-66 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | R036 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| Q015 Q016 | 8-729-100-66 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | R037 R038 | 1-216-049-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 1K 0 | 5% 5% | 1/10W 1/10W | |
| Q017 Q018 | 8-729-100-66 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | , | R039 R041 | 1-216-047-00 1-216-053-00 | METAL GLAZE METAL GLAZE | 820 1.5K | 5% 5% | 1/10W 1/10W | |
| Q019 Q020 | 8-729-100-66 8-729-100-66 | TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | R042 R043 | 1-216-047-00 1-216-111-00 | METAL GLAZE METAL GLAZE | 820 390K | 5% 5% | 1/10W 1/10W | |
| Q021 Q022 | 8-729-100-76 8-729-100-66 | TRANSISTOR 2SA812 TRANSISTOR 2SC1623 | | R044 R045 R046 | 1-216-073-00 1-216-041-00 1-216-045-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 10K 470 680 | 5% 5% 5% | 1/10W 1/10W 1/10W | |

YC-56 NC-8

| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | Remark |
|--------------------------------------|---|---|---|--|--------|---|--|---|--|-----------------------------------|----------------------------------|
| R047 R048 R049 R050 R051 | 1-216-047-00 1-216-047-00 1-216-047-00 1-216-047-00 1-216-067-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 820 55 820 55 820 55 820 55 5.6K 55 | % 1/10W % 1/10W % 1/10W | | R100 R101 R102 R103 R104 | 1-216-073-00 1-216-057-00 1-216-039-00 1-216-041-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 57 2.2K 57 390 57 470 57 1K 57 | 1/10W 1/10W 1/10W | |
| R052 R053 R054 R055 R056 | 1-216-075-00 1-216-049-00 1-216-041-00 1-216-041-00 1-216-061-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 12K 55 1K 55 470 55 470 55 3.3K 55 | % 1/10W % 1/10W % 1/10W | | R105 R106 R107 R108 | 1-216-073-00 1-216-077-00 1-216-049-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 59 15K 59 1K 59 1K 59 | 4 1/10W 4 1/10W | |
| R057 | 1 -216 -057 -00 | METAL GLAZE | 2.2K 5 | % 1/10W | | | VAR | IABLE RESISTOR | - | | |
| R058 R059 R060 R061 | 1-216-073-00 1-216-071-00 1-216-043-00 1-216-043-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 57 8.2K 57 560 57 560 57 | % 1/10W % 1/10W % 1/10W % 1/10W | | RV001 RV002 RV003 RV004 RV005 | 1-228-989-00 1-228-990-00 1-228-990-00 1-228-989-00 1-228-991-00 | RES, ADJ, CAR RES, ADJ, CAR RES, ADJ, CAR RES, ADJ, CAR RES, ADJ, CAR | BON 1K BON 1K BON 470 | | |
| R062 R063 | 1 -216 -045 -00 1 -216 -045 -00 | METAL GLAZE METAL GLAZE | 680 59 680 59 | | | | CON | NECTOR | | | |
| R064 R065 | 1-216-041-00 | METAL GLAZE | 470 55 470 55 | % 1/10W | | MOO1 | *1-563-313-11 | | אפה דה פר | 1ADN 10D | |
| R066 | 1-216-041-00 1-216-051-00 | METAL GLAZE METAL GLAZE | 1.2K 59 | | | | | • | | | |
| R067 | 1 -216 -055 -00 | METAL GLAZE | 1.8K 5 | 6 1/10W | | ***** | ***** | ***** | ***** | ***** | ***** |
| R068 R069 | 1-216-045-00 1-216-079-00 | METAL GLAZE METAL GLAZE | 680 59 18K 59 | 6 1/10W 6 1/10W | | | *A -7061 -4 94 -A | NC-8 BOARD, | | | |
| R070 R071 | 1 -216 -083 -00 1 -216 -045 -00 | METAL GLAZE METAL GLAZE | 27K 59 680 59 | | | | CAP | ACITOR | | | |
| R072 R073 R074 R075 R076 | 1-216-045-00 1-216-073-00 1-216-073-00 1-216-051-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 680 59 10K 59 10K 59 1.2K 59 1K 59 | 6 1/10W 6 1/10W 6 1/10W | | C401 C402 C403 C404 C405 | 1-163-133-00 1-163-133-00 1-126-094-11 1-163-092-00 1-163-097-00 | CERAMIC CHIP CERAMIC CHIP ELECT CERAMIC CHIP CERAMIC CHIP | 470PF 4.7MF 9PF | 10% 10% 20% 0.25PF 5% | 50V 50V 25V 50V 50V |
| R077 R078 R079 R080 R081 | 1 -216 -045 -00 1 -216 -079 -00 1 -216 -077 -00 1 -216 -079 -00 1 -216 -083 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 680 55 18K 55 15K 55 18K 55 27K 55 | % 1/10W % 1/10W % 1/10W | | C406 C407 C415 C416 C417 | 1-124-638-11 1-163-035-00 1-163-111-00 1-163-035-00 1-163-035-00 | ELECT CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 56PF 0.047MF | 20% 5% | 6.3V 50V 50V 50V 50V |
| R082 R083 R084 R085 R086 | 1-216-045-00 1-216-045-00 1-216-073-00 1-216-073-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 680 55 680 55 10K 55 10K 55 22K 55 | % 1/10W % 1/10W % 1/10W | | C418 C419 C420 C421 C422 | 1-163-035-00 1-124-638-11 1-163-035-00 1-124-438-00 1-163-009-11 | CERAMIC CHIP | 22MF 0.047MF 1MF | 20% 20% 10% | 50V 6.3V 50V 50V 50V |
| R087 R088 R089 R090 R091 | 1 -216 -055 -00 1 -216 -049 -00 1 -216 -083 -00 1 -216 -075 -00 1 -216 -069 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1.8K 55 1K 55 27K 55 12K 55 6.8K 55 | % 1/10W % 1/10W % 1/10W | | C423 C424 C425 | | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.047MF | 10% | 50V 50V 50V |
| R092 | 1-216-075-00 | METAL GLAZE | 12K 59 | % 1/10W | | CN401 | *1-564-785-11 | PIN, CONNECTO | R 7P | | |
| R093 | 1 -216 -075 -00 1 -216 -081 -00 | METAL GLAZE | 12K 5 | % 1/10W | | | *1-564-784-11 | | | | |
| R094 R095 | 1 -216 -059-00 | METAL GLAZE METAL GLAZE | 22K 55 | % 1/10W | | | 010 | DE | | | |
| R096 | 1-216-063-00 | METAL GLAZE | 3.9K 5 | % 1/10W | | D401 | 8-719-801-41 | DIODE 1SS196 | | | |
| R097 R098 R099 | 1 -216 -069 -00 1 -216 -075 -00 1 -216 -073 -00 | METAL GLAZE METAL GLAZE METAL GLAZE | 6.8K 55 12K 55 10K 55 | % 1/10W | | D402 D403 D405 | 8-719-801-41 8-719-100-05 8-719-800-76 | DIODE 1SS196 DIODE 1S2837 DIODE 1SS123 | | | |
| | | | | | | | | | | | |

NC-8 CB-8 IO-16

| No. | Part No. | Description | | Remark ' | 1 No. | Part No. | <u>Description</u> | | | | Remark |
|--------------------------------------|---|---|--------------------------|---|--------------------------------------|--|---|----------------------------------|----------------------------|---|--------|
| L401 L402 L403 L404 | 1-408-972-21 1-408-972-21 1-408-982-11 1-408-979-21 | INDUCTOR 15 INDUCTOR 15 INDUCTOR 16 INDUCTOR 16 | 5UH 5UH 5UH 5UH | | R445 R446 R447 R448 R449 | 1-216-049-00 1-216-057-00 1-216-031-00 1-216-051-00 1-216-092-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 2.2K 180 1.2K 62K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| L101 | | NS IS TOR | 1011 | | R450 R451 | 1-216-059-00 1-216-053-00 | METAL GLAZE METAL GLAZE | 2.7K 1.5K | 5% 5% | 1/10W 1/10W | |
| Q401 Q402 Q403 | 8-729-100-66 8-729-100-66 8-729-100-66 | TRANSISTOR 2SC162 TRANSISTOR 2SC162 TRANSISTOR 2SC162 | :3 | | R452 R453 R457 | 1-216-055-00 1-216-073-00 1-216-041-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 1.8K 10K 470 | 5% 5% 5% | 1/10W 1/10W 1/10W | |
| Q404 Q405 | 8-729-901-01 | TRANSISTOR DTC144 TRANSISTOR 2SA812 | EK | | R458 R459 | 1-216-049-00 1-216-061-00 | METAL GLAZE METAL GLAZE | 1K 3.3K | 5% 5% | 1/10W 1/10W | |
| Q406 Q407 Q418 Q419 Q420 | 8-729-901-01 | TRANSISTOR DTA114 TRANSISTOR 2SC162 TRANSISTOR DTC144 TRANSISTOR DTC144 TRANSISTOR 2SC162 | 3 EK EK | | **** | *1-621-987-11 | | ***** | **** | ****** | ***** |
| , | | | | | | CON | NECTOR | | | | |
| Q422 Q423 Q424 Q425 | 8-729-100-66 8-729-901-01 8-729-901-01 8-729-901-06 | | EK EK | | | 1-506-471-11 1-506-472-11 | | | | | |
| Q426 | | TRANSISTOR DTA144 | | | | DIO | DE | | | | |
| Q427 Q428 Q429 | | TRANSISTOR DTA144 TRANSISTOR DTA144 TRANSISTOR 2SC162 | EK | | D001 D002 D003 D004 | 8-719-106-22 8-719-106-22 | DIODE RD7.5M- DIODE RD7.5M- DIODE RD7.5M- DIODE RD7.5M- DIODE RD7.5M- | -B1 -B1 | * | | |
| | RES | <u>ISTOR</u> | | | D005 | | DIODE RD7.5M | | | | |
| R401 R402 R403 | 1-216-041-00 1-216-037-00 1-216-105-00 | METAL GLAZE 470 METAL GLAZE 330 METAL GLAZE 220 | 5% | 1/10W 1/10W 1/10W | D006 | | DIODE RD7.5M | -B1 | | | |
| R404 R405 | 1 -216 -105 -00 1 -216 -041 -00 | METAL GLAZE 220 METAL GLAZE 470 | K 5% | 1/10W 1/10W | R001 | 1-216-037-00 | METAL GLAZE | 330 | 5 % | 1/10W | |
| R406 R407 R408 | 1 -216 -037 -00 1 -216 -041 -00 1 -216 -049 -00 | METAL GLAZE 330 METAL GLAZE 470 METAL GLAZE 1K | | 1/10W 1/10W 1/10W | R002 R003 R004 R005 | 1-216-037-00 1-216-037-00 1-216-037-00 1-216-037-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 330 330 330 330 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | |
| R409 R410 | 1-216-045-00 1-216-039-00 | METAL GLAZE 680 METAL GLAZE 390 | | 1/10W 1/10W | R006 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R411 | 1 -216 -075 -00 | | | 1/10W | ***** | ***** | ******* | ***** | **** | ***** | ****** |
| R412 R413 R414 R415 | 1-216-081-00 1-216-039-00 1-216-073-00 1-216-073-00 | METAL GLAZE 390 METAL GLAZE 10K | 5% 5% | 1/10W 1/10W 1/10W 1/10W | | *1-629-042-11 | IO-16 BOARD | | | | |
| R416 | 1 -216 -065 -00 | | K 5% | 1/10W | | JAC | <u>K</u> | | | | |
| R417 R436 R437 R438 | 1-216-295-00 1-216-063-00 1-216-059-00 1-216-081-00 | | 5% K 5% K 5% | 1/10W 1/10W 1/10W 1/10W | J601 J602 | 1-507-792-00 | JACK (CONTROL JACK (CONTROL ISTOR | | | | |
| R439 R440 R441 R442 R444 | 1 -216 -083 -00 1 -216 -037 -00 1 -216 -041 -00 1 -216 -039 -00 1 -216 -049 -00 | METAL GLAZE 27K METAL GLAZE 330 METAL GLAZE 470 METAL GLAZE 390 | 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | R601 R602 R603 | 1-216-025-00 1-216-025-00 1-216-001-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 100 100 10 | 5% 5% 5% | 1/10W 1/10W 1/10W | ***** |

IO-17 FR-39 MJ-11

| No. | Part No. | Description | Remark | 1 No. | Part No. | Description | | | | Remark |
|--------------------------------------|--|---|---|--|--|--|--|----------------------------|--|----------------------------------|
| | *A-7061-497-B | IO -17 BOARD, COMPLETE | | R706 R707 R708 R709 | 1-216-015-00 1-216-025-00 1-216-069-00 1-216-069-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 39 100 6.8K 6.8K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | |
| C701 C702 C703 C704 C705 | 1-163-117-00 1-163-021-00 1-163-021-00 | CERAMIC CHIP 100PF CERAMIC CHIP 100PF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.47MF | 5% 50V 5% 50V 50V 50V 16V | R710 R711 R712 R713 R714 R715 | 1-216-069-00 1-216-069-00 1-216-089-00 1-216-089-00 1-216-089-00 1-216-089-00 | METAL GLAZE METAL GLAZE | 6.8K 6.8K 47K 47K 47K 47K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W | |
| C706 C707 C708 | 1-162-637-11 | CERAMIC CHIP 0.47MF CERAMIC CHIP 0.47MF CERAMIC CHIP 0.47MF | 16V 16V 16V | R716 R717 R718 | 1-216-055-00 1-216-055-00 | | 1.8K | 5% 5% 5% | 1/10W 1/10W 1/10W | |
| | JAC | <u>K</u> | | R719 R721 | 1-216-055-00 | | | 5% 5% | 1/10W 1/10W | |
| CNJ70 CNJ70 | 2 1-568-212-11 3 1-537-115-21 | TERMINAL BOARD (LINE IN 1 JACK 3P (LINE IN 2) TERMINAL BOARD (LINE OUT JACK 3P (LINE OUT 2) | • | R722 R723 R724 R725 | 1-216-021-00 1-216-021-00 1-216-021-00 1-216-025-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 68 68 68 100 | 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | |
| | <u>D10</u> | <u>DE</u> | | R726 | 1-216-089-00 | | 47K | 5% | 1/10W | |
| D701 D702 D703 D704 | 8-719-106-22 8-719-106-22 8-719-106-22 | DIODE RD7.5M-B1 DIODE RD7.5M-B1 DIODE RD7.5M-B1 DIODE RD7.5M-B1 | | R727 R728 R730 | 1-216-057-00 1-216-069-00 1-216-295-00 | METAL GLAZE METAL GLAZE | | 5% 5% 5% | 1/10W 1/10W 1/10W | |
| D705 D706 | | DIODE RD7.5M-B1 DIODE RD7.5M-B1 | | 0.70 | SWI | | | | | |
| D707 D708 D709 | 8-719-106-22 8-719-106-22 | DIODE RD7.5M-B1 DIODE RD7.5M-B1 DIODE RD7.5M-B1 DIODE RD7.5M-B1 | | \$701 \$702 | 1-554-377-51 1-554-377-51 ****** | SWITCH, SLIDE SWITCH, SLIDE | (CONTR | ROL L |) | ***** |
| D710 | 8-719-106-22 | DIODE RD7.5M-B1 | | | *1-629-041-11 | FR-39 BOARD | | | | |
| D711 D712 D713 D714 D715 | 8-719-106-22 8-719-106-22 8-719-106-22 | DIODE RD7-5M-B1 DIODE RD7-5M-B1 DIODE RD7-5M-B1 DIODE RD7-5M-B1 DIODE RD18M-B2 | | | *3-697-607-01 | ************************************** | LED | | | |
| D716 D717 D718 D719 | 8-719-107-15 8-719-106-71 8-719-106-71 | DIODE RD18M-B2 DIODE RD12M-B2 DIODE RD12M-B2 DIODE RD12M-B2 | | D101 D102 D103 | 8-719-812-32 8-719-920-05 8-719-920-05 | DIODE TLY123 DIODE SLP281C DIODE SLP281C | -50 | | | |
| | <u>IC</u> | | | ***** | ****** | | | | ****** | ***** |
| | 8-759-200-81 8-759-100-95 | | | | *A-7061-499-A | ****** | COMPLE | TE ** | | |
| | JAC | <u>K</u> | | C725 | 1-126-157-11 | ACITOR | 1045 | | 20% | 1611 |
| J701 | | SOCKET, DIN (SMALL TYPE) ISTOR | 5P (CONTROL L) | C726 C731 C732 | 1-126-157-11 1-126-157-11 1-124-225-00 | ELECT ELECT ELECT | 10MF 10MF 10MF 100MF | | 20% 20% 20% 20% | 16V 16V 16V 6.3V |
| R701 R702 R703 R704 R705 | 1-216-015-00 1-216-015-00 1-216-015-00 1-216-015-00 1-216-015-00 | METAL GLAZE 39 5% METAL GLAZE 39 5% METAL GLAZE 39 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | C733 C734 C741 C742 C743 | 1-163-121-00 1-126-157-11 1-124-225-00 | | 150PF 10MF 100MF | | 10% 5% 20% 20% 10% | 50V 50V 16V 6.3V 50V |

MJ-11 RS-17

| No. | Part No. | Description | | | | Remark | 1 <u>No.</u> | Part No. | Description | | | | Remark |
|--------------------------------------|--|--|-------------------------------------|----------------------|---|---------------------------------|--------------------------------------|--|---|--|----------------------------------|---|--------|
| C744 | 1-163-121-00 | CERAMIC CHIP | 150PF | | 5% | 50V | | 1-506-467-11 | | | | | |
| | <u>D10</u> | <u>DE</u> | | | | | CNUU6 | *1-506-467-11 | PIN, CONNECTO | JR 2P | | | |
| D101 | 8-719-109-59 | DIODE RD2.7E | S -B1 | | | | 10001 | <u>IC</u> | TC CV2011EA | | | | |
| | <u>IC</u> | | | | | | | 8-759-107-68 8-759-100-93 | | | | | |
| I C721 | 8-759-745-64 | IC NJM4560M- | -T1 | | | | | TRA | NSISTOR | | | | |
| | JAC | <u>K</u> | | | | | | 8-719-939-11 8-719-939-11 | | | | | |
| J301 J401 | 1-507-899-00 1-507-899-00 | JACK (SMALL JACK (SMALL | TYPE) TYPE) | (MIC L (MIC R |) } | | | 8-719-939-11 | | | | | |
| | | PER RESISTOR | 7 | • | , | | | TRA | NS IS TOR | | | | |
| JR049 JR050 JR051 | 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 0 0 0 0 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | Q001 Q002 Q003 Q004 Q005 | 8-729-901-01 8-729-901-01 8-729-903-97 | TRANSISTOR DI TRANSISTOR DI TRANSISTOR DI TRANSISTOR FN TRANSISTOR FN | TC144EK TC144EK 4S1FE | | | |
| JR071 | 1-216-296-00 | | 0 | 5% | 1/8W | | | RES | <u>ISTOR</u> | | | | |
| | RES | ISTOR | | | · | | R001 R002 | 1-216-081-00 1-216-055-00 | | 22K 1.8K | 5% 5% | 1/10W 1/10W | |
| R710 R731 R732 R733 R734 | 1-216-061-00 1-216-105-00 1-216-081-00 1-216-025-00 1-216-025-00 | METAL GLAZE METAL GLAZE | 3.3K 220K 22K 100 100 | | 1/10W 1/10W 1/10W 1/10W 1/10W | | R003 R004 R005 R006 R007 | 1-216-031-00 1-216-174-00 1-216-089-00 1-216-089-00 1-216-089-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 180 100 47K 47K 47K | 5% 5% 5% 5% | 1/10W 1/8W 1/10W 1/10W 1/10W | |
| R735 R741 R742 R743 R744 | 1-216-083-00 1-216-105-00 1-216-081-00 1-216-025-00 1-216-025-00 1-216-083-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 27K 220K 22K 100 100 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | R008 R009 R010 R011 | 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 10K 10K 10K 270K 10K | 5% 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W | |
| ***** | ******* | ****** | ***** | ***** | ***** | ***** | R015 | 1-216-107-00 | | 270K | 5% | 1/10W | |
| • | *A-7061-543-A 3-712-410-01 | ***** | , COMPL | _ETE **** | | | R016 R017 R018 R019 R020 | 1-216-073-00 | | 10K 10K 270K 10K 270K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| | CAP | ACITOR | | | | | R021 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| | 1-163-038-00 1-124-465-00 1-124-464-11 1-163-038-00 1-163-021-00 | ELECT ELECT CERAMIC CHIP CERAMIC CHIP | 0.47MF 0.22MF 0.1MF 0.01MF | . | 20% 20% 10% | 25V 50V 50V 25V 50V | | <u>THE</u> 1-202-854-00 | | | | ***** | ***** |
| | | NECTOR | | | | - • • | | | | | | | |
| CN003 * | 1-506-469-11 *1-506-469-11 *1-506-467-11 | PIN, CONNECT | OR 4P | | | | : | | | | | | |

| No. | Part No. | Description | | Remark | No. | Part No. | Description | | | | Remark |
|--------------------------------------|--|--|-------------------|-----------------------------------|--------------------------------------|--|---|------------------|----------------------------|---|--------|
| | *A-7061-589-A | DR-35 BOARD, COMPLETE | | | | <u>1C</u> | | | | | |
| | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 | T-3 | | IC201 IC202 | 8-759-937-36 8-759-937-36 | IC TL1451ACN IC TL1451ACN | S S | | | |
| | CAP | ACITOR | | | | JUM | PER RESAISTOR | | | | |
| C201 C203 C203 C204 C205 | 2 1-163-021-00 3 1-163-038-00 4 1-163-038-00 | CERAMIC CHIP 0.01MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF | 20% 10% 20% | 50V 50V 25V 25V 16V | JR002 JR003 JR004 | 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 0 0 0 0 | 5% 5% 5% 5% 5% | 1/8W 1/8W 1/8W 1/8W 1/8W | |
| C202 C208 C208 C210 C21 | 3 1-163-038-00 9 1-126-335-11 1-163-038-00 | CERAMIC CHIP 0.1MF | 20% 20% 10% | 6.3V 25V 6.3V 25V 50V | JR009 | 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 0 0 0 | 5% 5% 5% 5% 5% | 1/8W 1/8W 1/8W 1/8W 1/8W | |
| C212 C214 C214 C216 C217 | 3 1-163-038-00 4 1-126-103-11 5 1-123-333-00 | CERAMIC CHIP 0.1MF ELECT 470MF | 20% 20% 20% | 50V 25V 16V 16V 25V | JR012 JR013 JR014 | 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 0 0 0 | 5% 5% 5% 5% 5% | 1/8W 1/8W 1/8W 1/8W 1/8W | |
| C218 C218 C228 C228 C228 | 9 1-163-139-00 0 1-163-038-00 1 1-163-038-00 | CERAMIC CHIP 0.01MF CERAMIC CHIP 820PF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF ELECT 220MF | 10% 5% 20% | 50V 50V 25V 25V 10V | JR017 JR018 JR019 | 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 0 0 0 | 5% 5% 5% 5% 5% | 1/8W 1/8W 1/8W 1/8W 1/8W | |
| C22 C22 C22 C22 C22 | 5 1-126-103-11 5 1-163-038-00 7 1-123-336-00 | ELECT 470MF CERAMIC CHIP 0.1MF | 20% 20% | 25V 16V 25V 25V 25V | JR022 JR023 JR024 | 1-216-296-00 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 0 0 0 | 5% 5% 5% 5% 5% | 1/8W 1/10W 1/10W 1/10W 1/10W | |
| C229 C230 C231 C231 C231 | 0 1-163-038-00 1 1-126-168-11 2 1-126-168-11 | ELECT 1000MF ELECT 1000MF | 20% 20% 20% | 25V 25V 6.3V 6.3V 16V | JR029 | 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 | METAL GLAZE | 0 0 0 0 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| C23! | | CERAMIC CHIP 0.1MF ELECT 100MF | 20% | 25V 6.3V | | <u>cor</u> | <u>L</u> | | | | |
| C24: | 1 1-126-335-11 <u>CON</u> | | 20% | 6.3V | L201 L202 L203 L205 L206 | 1-408-945-00 1-408-944-00 1-408-944-00 1-408-944-00 1-408-945-00 | COIL, CHOKE COIL, CHOKE | 200H 200H | | · . | |
| CN2 | 02 *1-560-895-00 03 *1-560-894-00 04 *1-560-890-00 | PIN, CONNECTOR 7P PIN, CONNECTOR 6P PIN, CONNECTOR 2P | | | L207 L208 L209 | 1-408-944-00 1-408-944-00 1-408-944-00 | COIL, CHOKE | 20UH 20UH | | | |
| D20: | <u>DIC</u> | | | | L210 L211 | 1-408-944-00 1-408-944-00 | | | | | |
| D20: D20: D20: | 9-982-928-00 9-982-928-00 4 8-719-100-03 | DIODE 31DQ06 | | | L264 PS 202 <u>4</u> | 1-408-945-00 IC 1-532-637-21 | LINK | | | | |
| | | | | | ļ | | | | | | |

The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque 🛕 sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

| Q202 8 Q203 | 8-729-112-61 8-729-100-66 8-729-216-22 8-729-113-33 8-729-112-61 8-729-216-22 8-729-901-01 8-729-112-61 8-729-100-66 8-729-216-22 8-729-100-66 | TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S | SC1623 SA1162 SB733-4 SA1441 SC1623 SA1162 TC144EK SA1441 SC1623 SA1162 TC144EK | | | | ***** | ************** *A-7061-674-A 1-519-410-11 *3-689-521-01 3-691-611-11 | HOLDER (RE), LED | **** | ***** |
|--------------------------------------|--|---|---|----------------------------------|---|-------|--------------------------------------|--|---|-------------------|---------------------------------|
| Q202 8 Q203 | 8-729-100-66 8-729-216-22 8-729-113-33 8-729-112-61 8-729-100-66 8-729-901-01 8-729-100-66 8-729-100-66 8-729-216-22 8-729-901-01 8-729-901-01 8-729-901-01 | TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR DT TRANS ISTOR DT TRANS ISTOR DT | SC1623 SA1162 SB733-4 SA1441 SC1623 SA1162 TC144EK SA1441 SC1623 SA1162 TC144EK | | | | | *A-7061-674-A 1-519-410-11 *3-689-521-01 3-691-611-11 *3-695-988-01 | FT-37 BOARD, COMPLETE *********************************** | | ***** |
| 0206 8 0207 8 | 8 -729 -100 -66 8 -729 -216 -22 8 -729 -901 -01 8 -729 -112 -61 8 -729 -100 -66 8 -729 -216 -22 8 -729 -901 -01 8 -729 -901 -01 | TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 05 TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR 2S TRANS ISTOR DT TRANS ISTOR DT | 5C1623 5A1162 TC144EK 5A1441 5C1623 5A1162 TC144EK | | | | | *3-689-521-01 3-691-611-11 *3-695-988-01 | HOLDER, LED, ROUND KNOB (S), CONTROL HOLDER (RE), LED | ENT | |
| Q209 <u></u> | 8-729-901-01 8-729-901-01 8-729-901-01 | TRANSISTOR DT | TC144EK TC144EK | | | | | | HOLDER (SU), LED | | |
| Q212 8 Q213 8 | | | I (. I 44F K | | | 1 | i | *3-716-871-01 *3-722-112-01 | HOLDER (LEFT), INDICATION HOLDER (RIGHT), INDICATION HOLDER, LED, 2 GANG ACITOR | N TUBE N TUBE | |
| 4 | KLJ | 1C TOP | | | | - | C001 | | | | 16 V |
| R202 1 R203 1 R204 1 | 1 -216 -085 -00 1 -216 -085 -00 1 -216 -115 -00 1 -249 -413 -11 | | 33K 33K 560K 470 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/4W | | C001 C003 C004 C005 C006 | 1-163-093-00 1-163-117-00 1-163-117-00 | CERAMIC CHIP 0.47MF CERAMIC CHIP 10PF CERAMIC CHIP 100PF CERAMIC CHIP 100PF CERAMIC CHIP 0.01MF | 5% 5% 5% | 50V 50V 50V 50V |
| R206 1 R207 1 R208 1 | 1-216-055-00 1-216-055-00 1-216-051-00 1-216-095-00 1-216-065-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1.8K 1.2K 82K 4.7K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | C009 C010 C011 C012 C013 | 1 -126 -162 -11 1 -163 -097 -00 | CERAMIC CHIP 15PF CERAMIC CHIP 22PF | 20% 5% 5% | 50V 50V 50V 50V 50V |
| R211 1 R212 1 R213 1 R214 1 R215 1 | 1-216-033-00 1-216-687-11 1-216-687-11 1-216-115-00 1-249-413-11 1-216-055-00 | METAL GLAZE METAL CHIP METAL CHIP METAL GLAZE CARBON | 220 33K 33K 560K 470 1.8K | 5% 0.50% 0.50% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/4W 1/10W | | C014 C015 C016 C017 C018 | 1-126-160-11 1-126-157-11 | ELECT 10MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF | 20% 20% 20% | 50V 50V 16V 50V 50V |
| R218 1 R219 1 R220 1 | 1 -216 -055 -00 1 -216 -051 -00 1 -216 -699 -11 1 -216 -679 -11 1 -216 -085 -00 | | 1.8K 1.2K 100K 15K 33K | 5% 5% 0.50% 0.50% 5% | 1/10W 1/10W 1/10W | | C020 | 1-163-035-00 <u>CON</u> 1-506-467-11 | CERAMIC CHIP 0.047MF NECTOR PIN, CONNECTOR 2P MMER | | 50V |
| | 1 -216 -085 -00 1 -216 -067 -00 | METAL GLAZE METAL GLAZE | 33K | 5% | 1/10W | * * * | CVOOL | - | | | |
| R224 1 R225 1 | 1 -216 -055 -00 1 -216 -055 -00 1 -216 -055 -00 | METAL GLAZE METAL GLAZE METAL GLAZE | 5.6K 560K 1.8K 1.8K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | | CVOOL | 1-141-291-11 DIO | | | - |
| R227 1 R228 1 R229 1 R230 1 | 1-216-065-00 1-216-099-00 1-216-077-00 1-216-081-00 1-216-055-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 4.7K 120K 15K 22K 1.8K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | D001 D002 D003 D004 D005 | 8-719-100-03 8-719-100-03 8-719-100-03 8-719-100-03 8-719-100-03 | DIODE 1S2835 DIODE 1S2835 | | |
| | 1 -216 -0 91 -00 | | 56K | 5% | 1/10W | | D006 | 8-719-100-03 | | | |
| 1 | | IABLE RESISTOR | | J 10 | 1/10# | | D007 D008 D009 D010 | 8-719-100-03 8-719-100-03 8-719-100-03 8-719-100-03 | | | |
| RV201 1 RV202 1 | 1 –226 –703 –11 1 –226 –703 –11 | RES, ADJ, MET RES, ADJ, MET | TAL GLAZ | ZE 10K ZE 10K | | | D011 | 8-719-100-03 | | | |

The components identified by mark or dotted line with mark are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque 🐧 sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

| No. Part No. | Description | Remark | No. | Part No. | Description | | Remark |
|--|---|---|--------------------------------------|--|---|---|---|
| D013 8-719-100 D014 8-719-100 D018 8-719-100 | -03 DIODE 152835 -03 DIODE 152835 -03 DIODE 152835 -03 DIODE 152835 -03 DIODE 152835 | | R013 R014 R015 R016 R017 | 1-216-081-00 1-216-097-00 1-216-097-00 1-216-097-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 22K 5% 100K 5% 100K 5% 100K 5% 10K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W |
| D024 8-719-106 D025 8-719-100 D026 8-719-100 | -32 DIODE TLY123 -43 DIODE RD9.1M-B1 -03 DIODE 1S2835 -03 DIODE 1S2835 -22 DIODE RD7.5M-B1 | | R018 R019 R020 R021 R022 | 1-216-113-00 1-216-113-00 1-216-113-00 1-216-069-00 1-216-073-00 | METAL GLAZE METAL GLAZE | 470K 5% 470K 5% 470K 5% 6.8K 5% 10K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W |
| D030 8-719-106 D032 8-719-812 D033 8-719-812 | -22 DIODE RD7.5M-B1 -22 DIODE RD7.5M-B1 -32 DIODE TLY123 -32 DIODE TLY123 -32 DIODE TLY123 | | R023 R024 R025 R026 R028 | 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1 OK 5% 1 OK 5% 1 OK 5% 1 OK 5% 1 OK 5% | 1/10W 1/10W 1/10W 1/10W 1/10W |
| D036 8-719-920 D037 8-719-812 D038 8-719-812 | -22 DIODE RD7.5M-B1 -22 DIODE RD7.5M-B1 -22 DIODE RD7.5M-B1 -32 DIODE TLY123 -32 DIODE TLY123 -32 DIODE TLY123 -35 DIODE TLY123 -05 DIODE SLP281C-50 -05 DIODE SLP281C-50 -05 DIODE TLR123 -31 DIODE TLR123 -31 DIODE TLR123 -31 DIODE TLR123 -96 DIODE AA3422S -96 DIODE AA3422S -96 DIODE SLP281C-50 -97 DIODE TLY123 -98 DIODE TLY123 -99 DIODE TLY123 -99 DIODE TLY123 -99 DIODE TLY123 -99 DIODE TLY123 -99 DIODE TLY123 | | R029 R030 R032 R034 R037 | 1-216-065-00 1-216-037-00 1-216-295-00 1-216-073-00 1-216-097-00 | METAL GLAZE METAL GLAZE | 4.7K 5% 330 5% 0 5% 10K 5% 100K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W |
| D041 8-719-918 D042 8-719-812 D043 8-719-920 | .96 DIODE AA3422S .96 DIODE AA3422S .32 DIODE TLY123 .05 DIODE SLP281C-50 .31 DIODE TLR123 | | R039 R040 R041 R042 R043 | 1-216-085-00 1-216-085-00 1-216-097-00 1-216-097-00 1-216-097-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 33K 5% 33K 5% 100K 5% 100K 5% 100K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W |
| D045 8-719-918 | -96 DIODE AA3422S | | R044 R045 | 1-216-097-00 1-216-097-00 | METAL GLAZE METAL GLAZE | 100K 5% 100K 5% | 1/10W 1/10W |
| 10001 0 750 111 | <u>IC</u> | | R052 R053 | 1-216-041-00 1-216-041-00 | METAL GLAZE METAL GLAZE | 470 5% 470 5% | 1/10W 1/10W |
| ICO01 8-759-111 ICO02∱ 8-752-804 ICO03 8-759-604 ICO04 8-759-200 ICO05 8-759-111 | 31 DIODE TLR123 -96 DIODE AA3422S IC -97 IC UPD75208G-527-1B -35 IC CXP5016-253Q -09 IC M51955BL -82 IC TC4069UBF -66 IC UPD7566G-505 -21 IC CXD1078M -78 IC TC504013BF TRANSISTOR 43 TRANSISTOR 2SB624-BV3 -01 TRANSISTOR DTC144EK RESISTOR -00 METAL GLAZE 10K 5% -00 METAL GLAZE 10K 5% -00 METAL GLAZE 10K 5% -00 METAL GLAZE 10K 5% -00 METAL GLAZE 10K 5% | · | R055 R056 R057 R058 | 1-216-037-00 1-216-041-00 1-216-041-00 1-216-041-00 | METAL GLAZE METAL GLAZE | 330 5% 470 5% 470 5% 470 5% | 1/10W 1/10W 1/10W 1/10W |
| IC006 8-759-937 IC007 8-759-205 | -21 IC CXD1078M -78 IC TC504013BF | | R059 R060 | 1-216-041-00 1-216-041-00 | METAL GLAZE METAL GLAZE | 470 5% 470 5% | 1/10W 1/10W |
| | TRANSISTOR | | R061 | 1-216-097-00 | METAL GLAZE | 100K 5% | 1/10W |
| Q001 8-729 - 162 | 43 TRANSISTOR 2SB624-BV3 | | | <u>VAR</u> | IABLE RESISTOR | | |
| Q002 8-729-901 | O1 TRANSISTOR DTC144EK | | RV001 | 1-237-219-11 | | BON 1K | |
| R002 1-216-073 | OO METAL CLAZE 10V 5% | 1 (104 | cuons | <u>SWI</u> | | / JUDIO MON | |
| R005 1216 -097 | 00 METAL GLAZE 10K 5% 00 METAL GLAZE 10K 5% 00 METAL GLAZE 10OK 5% 00 METAL GLAZE 10OK 5% 00 METAL GLAZE 10K 5% | 1/10W 1/10W 1/10W 1/10W | SW003 SW004 SW005 | 1-570-854-11 1-570-854-11 1-554-174-00 1-554-174-00 1-554-174-00 | SWITCH, SLIDE SWITCH, KEY B SWITCH, KEY B | (PCM MODE) OARD (REW) OARD (FF) | TIOK) |
| R007 1-216-081 R008 1-216-081 R009 1-216-093 R010 1-216-073 R011 1-216-073 | 00 METAL GLAZE 22K 5% 00 METAL GLAZE 68K 5% 00 METAL GLAZE 10K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | SW009 | 1-554-174-00 1-554-174-00 1-554-174-00 1-554-174-00 | SWITCH, KEY B SWITCH, KEY B SWITCH, KEY B (SWITCH, KEY B | OARD (SYNCH OARD CHANNEL 1 T | |
| R012 1-216-085 | | 1/10W | | 1-554-174-00 | . (| CHANNEL 1 T | RACK/INDEX +) /STILL) |

The components identified by mark or dotted line with mark are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque 🐧 sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

| No. Doub No. | Denoviation | Domanie | N. | Daut No | Danauintian | | | Domank |
|--|--|--------------------|--------------|------------------------------|-----------------------|------------------|------------|--------------|
| No. Part No. | <u>Description</u> | Remark | No. | Part No. | Description | | | Remark |
| SW012 1-554-174-00 SW013 1-554-174-00 | SWITCH, KEY BOARD (X2) SWITCH, KEY BOARD (AUDIO | DUR.) | C121 C122 | 1-163-038-00 1-163-117-00 | CERAMIC CHIP | | 5% | 25V 50V |
| SW014 1-554-174-00 | | DOD) | C122 | 1-163-117-00 | | | 5% | 50V 50V |
| | SWITCH, KEY BOARD (INDEX | | C201 | 1-163-017-00 | | | 10% | 50V |
| SW016 1-554-174-00 | SWITCH, KEY BOARD (INDEX | ERASE) | C202 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| SW017 1-554-174-00 | | | C203 | 1-163-809-11 | | | 10% | 25V |
| SW018 1-554-174-00 SW019 1-554-174-00 | | | C204 C205 | 1-124-463-00 1-163-038-00 | ELECT CERAMIC CHIP | 0.1MF | 20% | 50V 25V |
| | SWITCH, KEY BOARD (OPEN/O | | C206 | 1-126-151-11 | ELECT | 4.7MF | 20% | 16V |
| SW021 1-554-088-00 | SWITCH, KEY BOARD (REC) | · | C207 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| SW022 1-554-174-00 | SWITCH, KEY BOARD (STD AL | UDIO MAIN/SUB) | C208 | 1-126-162-11 | ELECT | 3.3MF | 20% | 50V |
| SW023 1-554-174-00 | SWITCH, KEY BOARD (TV/VTF | R) | C209 | 1-126-096-11 | ELECT | 10MF | 20% | 25V |
| SW024 1-554-174-00 SW025 1-570-865-11 | SWITCH, KEY BOARD (COUNTE SWITCH, SLIDE (LINE) | ER RESEI) | C210 C211 | 1-126-096-11 1-126-096-11 | ELECT | 10MF 10MF | 20% 20% | 25V 25V |
| | SWITCH, SLIDE (Hi 8) | | C212 | 1-126-096-11 | | 10MF | 20% | 25V |
| CR: | YSTAL | | C213 | 1-126-160-11 | FLECT | 1MF | 20% | 50V |
| | 10 1712 | | C214 | 1-126-160-11 | | 1MF | 20% | 50V |
| | VIBRATOR, CRYSTAL (4.19M) | | C215 C216 | 1-126-160-11 1-124-229-00 | ELECT | 1MF 33MF | 20% 20% | 50 V 10 V |
| | OSCILLATOR, CERAMIC (700k OSCILLATOR, CERAMIC (4.19 | | C217 | 1-124-229-00 | | 33MF | 20% | 100 |
| ****** | ****** | ***** | C218 | 1-124-229-00 | CLCCT | 33MF | 20% | 10V |
| | | | C222 | | CERAMIC CHIP | | 20% | 50V |
| *A-7061-727-A | SP-7 BOARD, COMPLETE | | C223 | 1-163-021-00 | CERAMIC CHIP | 0.01MF | | 50V |
| | ************************************** | rd) | C224 C225 | 1-163-021-00 | CERAMIC CHIP | | | 50V 50V |
| 0.41 | , , | , | | | | | 1.0% | F.OV |
| CA | PACITOR | | C228 C229 | 1-163-021-00 | CERAMIC CHIP | 0.01MF 10MF | 10% 20% | 50V 50V |
| C001 1-123-875-11 | | 20% 50V | C230 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| | CERAMIC CHIP 0.1MF CERAMIC CHIP 100PF | 25V 5% 50V | C231 C232 | 1-163-017-00 1-163-209-00 | CERAMIC CHIP | | 10% 5% | 50V 50V |
| | CERAMIC CHIP 100PF | 5% 50V | | 1-103-207-00 | OLIVAITIC OIII | 0.0013/11 | J /6 | |
| C020 1-123-875-11 | ELECT 10MF | 20% 50V | C233 | | CERAMIC CHIP | | 5% 5% | 50V 50V |
| CO21 1 -163 -038 -00 | CERAMIC CHIP 0.1MF | 257 | C234 C235 | 1-163-117-00 | CERAMIC CHIP | | J/0 | 50V |
| C022 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V | C236 | 1-163-019-00 | CERAMIC CHIP | 0.0068MF | 10% | 50V |
| | CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF | 25V 25V | C237 | 1-126-320-11 | ELECT | 10MF | 20% | 16V |
| C025 1-126-157-11 | | 20% 16V | C238 | 1-124-499-11 | | 1MF | 20% | 50V |
| C030 1 -123-875 -11 | ELECT 10MF | 20% 50V | C239 C240 | 1-163-021-00 1-163-037-11 | CERAMIC CHIP | | 10% | 50V 25V |
| C031 1-163-038-00 | CERAMIC CHIP 0.1MF | 257 | C241 | 1-163-037-11 | CERAMIC CHIP | | 10% | 25 V |
| | CERAMIC CHIP 10PF | 5% 50V 5% 50V | C242 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| | CERAMIC CHIP 10PF CERAMIC CHIP 0.1MF | 25V | C243 | 1-124-277-11 | ELECT | 4.7MF | 20% | 35V |
| COE1 1 162 020 00 | CEDANIC OUTD O INC | 0514 | C244 | 1-123-875-11 | | 10MF | 20% | 507 |
| | CERAMIC CHIP 0.1MF CERAMIC CHIP 22PF | 25V 5% 50V | C245 C246 | | CERAMIC CHIP | | 10% | 25V 25V |
| C081 1 -163 -101 -00 | CERAMIC CHIP 22PF | 5% 50V | C247 | 1-124-767-00 | | 2.2MF | 20% | 50V |
| C082 1-131-345-00 C083 1-124-261-00 | | 10% 35V 20% 50V | C248 | 1_163_021_00 | CERAMIC CHIP | 0.01MF | | 50 V |
| | | · | C249 | 1-124-499-11 | | 1MF | 20% | 50V |
| | CERAMIC CHIP 0.1MF | 25V | C250 | | CERAMIC CHIP | | 10% | 50 V |
| | CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF | 25V 25V | C251 C255 | 1-124-443-00 | CERAMIC CHIP ELECT | 0.047MF 100MF | 10% 20% | 25V 6.3V |
| C087 1-161-772-11 | CERAMIC 0.1MF | 10% 25V | | | | | | |
| C088 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V | C256 C257 | 1-124-443-00 1-124-927-11 | | 100MF 4.7MF | 20% 20% | 6.3V 50V |
| C120 1 -163 -038 -00 | CERAMIC CHIP 0.1MF | 25V | C258 | 1-124-925-11 | | 2.2MF | 20% | 50V |

SP-7

| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | Remark |
|----------------------|---|--|--------------------------|-------------------|-------------------|----------------------|--|--|--------------------|-------------------|-------------------|
| C259 C260 C261 | 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.01MF | 10% 10% | 50V 50V 25V | C646 C647 C648 | 1-163-035-00 1-163-035-00 | CERAMIC CHIP | 0.047MF 0.047MF | | 50V 50V |
| C262 C264 | 1-163-809-11 1-163-109-00 | CERAMIC CHIP | 0.047MF | 10% 10% 5% | 25V 50V | C650 C654 | 1-163-035-00 1-163-035-00 1-163-035-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.047MF | | 50V 50V 50V |
| C470 C471 C472 | 1-130-497-00 1-163-989-11 | | | 10% 10% | 50V 25V | C660 C661 | 1-163-125-00 1-163-125-00 | CERAMIC CHIP | 220PF | 5% 5% | 50V 50V |
| C473 C485 | 1-163-077-00 1-162-587-91 1-130-495-00 | CERAMIC CHIP MYLAR | | 10% 5% | 50V 25V 50V | C662 C663 C698 | 1-163-109-00 1-163-109-00 1-163-035-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 47PF | 5% 5% | 50V 50V 50V |
| C490 C491 | 1-163-035-00 1-126-162-11 | | 3.3MF | 20% | 50V 50V | C701 C702 | | CERAMIC CHIP | 0.047MF | 10% 10% | 50V 25V |
| C492 C493 C500 | 1 -163 -035 -00 1 -124 -589 -11 1 -163 -035 -00 | CERAMIC CHIP ELECT CERAMIC CHIP | 47MF | 20% | 50V 10V 50V | C703 C705 C706 | | CERAMIC CHIP | 0.022MF | 5% 10% 10% | 50V 25V 25V |
| C501 C502 | 1-163-035-00 1-163-131-00 | | 390PF | 10% | 50V 50V | C707 C708 | 1-126-233-11 1-163-017-00 | ELECT CERAMIC CHIP | | 20% 10% | 25V 50V |
| C591 C592 C593 | 1-163-111-00 1-163-111-00 1-163-035-00 | | 56PF | 5% 5% | 50V 50V 50V | C709 C710 C711 | 1-163-809-11 1-124-256-00 1-163-989-11 | CERAMIC CHIP ELECT CERAMIC CHIP | 1.5MF | 10% 20% 10% | 25V 50V 25V |
| C594 C595 | 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP | 0.01MF | 5% | 50V 50V | C712 C713 | 1 -163 -105 -00 1 -163 -123 -00 | CERAMIC CHIP CERAMIC CHIP | | 5% 5% | 50V 50V |
| C600 C601 C602 | 1-163-035-00 1-163-809-11 1-126-157-11 | CERAMIC CHIP | | 10% 20% | 50V 25V 16V | C714 C715 C716 | | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.1MF | 5% | 50V 25V 25V |
| C603 C605 | 1 -163 -035 -00 1 -163 -109 -00 | CERAMIC CHIP CERAMIC CHIP | | 5% | 50V 50V | C717 C718 | 1-163-038-00 | CERAMIC CHIP CERAMIC CHIP | 0.1MF | | 25V 50V |
| C606 C607 C608 | 1-163-093-00 | CERAMIC CHIP | 10PF 82PF | 5% 5% | 50V 50V 50V | C719 C720 C721 | | ELECT CERAMIC CHIP CERAMIC CHIP | | 20% 5% | 50V 25V 50V |
| C609 C610 | | CERAMIC CHIP | 0.047MF | | 50V 50V | C722 C723 | 1-163-101-00 | CERAMIC CHIP CERAMIC CHIP | 22PF | 5% 10% | 50V 50V |
| C611 C612 C613 | 1-126-157-11 | ELECT CERAMIC CHIP | 10MF 0.047MF | 20% | 16V 50V 50V | C724 C725 C726 | 1-163-111-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 56PF | 5% 5% 5% | 50V 50V 50V |
| C614 C615 | 1 -126 -157 -11 | | 10MF | 20% | 16V 50V | C727 C728 | 1-163-021-00 | CERAMIC CHIP ELECT | | 20% | 50V 50V |
| C616 C617 C618 | 1-124-465-00 | ELECT ELECT | 0.47MF 3.3MF 6.8MF | 20% 20% 20% | 50V 50V 10V | C730 C731 C734 | 1-163-111-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 56PF | 5% 5% 5% | 50V 50V 50V |
| C619 C620 | | CERAMIC CHIP | 22PF | 5% | 50V 50V | C735 C736 | 1-163-809-11 | | 0.047MF | 10% 10% | 25V 50V |
| C624 C627 C628 | 1-163-085-00 1-163-101-00 | CERAMIC CHIP | 2PF 22PF | 0.25PF 5% | 50V 50V | C740 C770 | | CERAMIC CHIP | | 20% | 50V 50V |
| C629 C630 | 1 -163-035-00 | ELECT | 10MF | 20% | 16V | C785 C786 C801 | 1-163-021-00 1-163-021-00 1-163-021-00 | | 0.01MF | 10% 10% | 50V 50V 50V |
| C632 C633 | 1-163-035-00 1-163-035-00 1-126-157-11 | CERAMIC CHIP ELECT | 0.047MF 10MF | 20% | 50V 50V 16V | C802 C803 | 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP | 0.01MF | | 50V 50V |
| C635 | 1 -126 -157 -11 1 -163 -035 -00 | CERAMIC CHIP | | 20% | 16V 50V | C804 C805 C806 | 1-163-021-00 | CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP | 0.01MF | | 50V 50V 50V |
| C639 C645 | 1 -126-157-11 1 -163-035-00 | | 10MF 0.047MF | 20% | 16V 50V | C807 | 1-163-021-00 | | | | 50V |

| No. | Part No. | Description | Remark | No. | Part No. | Description | | Remark |
|--------------------------------------|---|--|---------------------------------|--------------------------------------|--|--|-----|--------|
| C808 C809 C810 C811 C814 | 1-163-021-00 1-163-021-00 1-163-021-00 1-163-021-00 1-163-141-00 | CERAMIC CHIP 0.01MF | 50V 50V 50V 50V 50V | D020 D021 D060 D080 | 8-719-914-42 8-719-100-05 | DIODE DÁZOÁK | | |
| C815 C816 C817 C818 C820 | 1-163-021-00 1-163-021-00 1-163-021-00 | CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.047MF | 50V 50V 50V 50V 50V | D081 D082 D098 D099 | 8-719-914-44 8-719-914-43 8-719-100-03 8-719-100-05 | DIODE DAP202K DIODE DAN202K DIODE 152835 DIODE 152837 | | |
| C821 C822 C823 | 1-163-035-00 | CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF | 50V 50V 50V | D120 D203 D204 | 8-719-200-27 | DIODE DAP202K DIODE E10DS2 DIODE 1SS187 | | |
| | CON | NECTOR | | D205 D206 D208 | 8-719-914-44 8-719-801-45 8-719-914-44 | DIODE DAP202K DIODE 1SS187 DIODE DAP202K | | |
| CN002 CN003 CN004 | 1-506-470-11 *1-506-469-11 | PIN, CONNECTOR 7P PIN, CONNECTOR 5P PIN, CONNECTOR 4P PIN, CONNECTOR 2P PIN, CONNECTOR 5P | | D209 D210 D211 D212 | 8-719-914-42 8-719-914-42 8-719-914-42 8-719-914-44 | DIODE DANZOZK DIODE DAZO4K DIODE DAZO4K DIODE DAPZOZK | | |
| CN007 CN008 | 1-506-468-11 1-506-470-11 *1-506-467-11 1-506-472-11 | PIN, CONNECTOR 3P PIN, CONNECTOR 5P PIN, CONNECTOR 2P PIN, CONNECTOR 7P | | D213 D214 D215 D216 | | DIODE DAP202K DIODE DAP202K DIODE DAP202K DIODE DAP202K | · | |
| CN010 CN011 | *1-506-467-11 1-506-470-11 1-506-486-11 | PIN, CONNECTOR 2P | | D217 D218 D223 | 8-719-100-05 8-719-914-43 8-719-914-43 | DIODE 1S 2837 DIODE DAN202K | | |
| CN013 CN014 | 1-506-468-11 | PIN, CONNECTOR 3P PIN, CONNECTOR 4P PIN, CONNECTOR 3P | , | D225 D226 D227 D230 | 8-719-100-05 8-719-914-44 8-719-100-05 8-719-105-82 | DIODE 1S 2837 DIODE DAP202K DIODE 1S 2837 DIODE RD5.1M-B2 | | |
| CN017 CN018 CN019 | *1-506-467-11 *1-506-467-11 1-506-468-11 *1-506-467-11 1-506-471-11 | PIN, CONNECTOR 2P | | D231 D233 D280 D281 | 8-719-100-05 8-719-100-05 8-719-100-05 8-719-914-44 | | | |
| CN021 CN022 | 1-506-470-11 1-506-467-11 *1-506-474-11 | PIN, CONNECTOR 5P | .** | D282 D390 D391 | 8-719-914-44 8-719-914-43 | DIODE DAP202K DIODE DAN202K DIODE DAP202K | . ^ | |
| CN200 CN212 | 1-506-471-11 *1-506-476-11 | PIN, CONNECTOR 6P PIN, CONNECTOR 11P | | D3 92 D3 93 D4 43 | 8-719-100-05 8-719-914-43 8-719-801-45 | DIODE 1S2837 DIODE DAN2O2K DIODE 1SS187 | | |
| CN214 CN215 CN216 | *1-506-483-21 1-506-471-11 *1-506-471-11 1-506-474-11 1-506-468-11 | PIN, CONNECTOR 4P PIN, CONNECTOR 6P PIN, CONNECTOR 6P PIN, CONNECTOR 9P PIN, CONNECTOR 3P | | D461 D463 D464 D470 D485 | 8-719-801-52 8-719-914-44 | DIODE DAP202K DIODE 1SS190 DIODE DAP202K DIODE 1S2837 DIODE 1S2837 | | |
| CN501 CN601 CN603 | *1-566-128-11 1-506-473-11 1-506-472-11 1-506-484-11 1-506-473-11 | PIN, CONNECTOR 8P PIN, CONNECTOR 7P | | D4 90 D5 01 D5 02 D6 00 | 8-719-101-23 8-719-101-23 8-719-100-05 8-719-108-24 | DIODE 1SS123 DIODE 1SS123 DIODE 1SS123 DIODE 1S2837 DIODE 1S2837 | | |
| CN606 CN607 | 1-506-467-11 1-506-468-11 | PIN, CONNECTOR 2P PIN, CONNECTOR 3P | | D601 D603 D604 | 8-719-100-05 8-719-100-03 8-719-100-05 | DIODE 1S2837 DIODE 1S2835 DIODE 1S2837 | | |
| | | | | | | | | |

| No. | Part No. | Description | Remark | No. | Part No. | Description | | | Remark |
|---|--|---|--------|--------------------------------------|--|--|--|--------|--------|
| D605 D701 D702 | 8-719-100-05 | DIODE 1SS190 DIODE 1S2837 DIODE DAP202K | | IC701 | 8-759-929-17 8-759-928-56 8-759-100-95 | IC CXA1042M | | | |
| | <u>FUS</u> | <u>E</u> | | | JUM | IPER RESISTOR | | | |
| F001 🛭 | \.1-532-960-11 | FUSE, MICRO 1.25A/125V | | JR001 | 1-216-296-00 | METAL GLAZE | 0 59 | 6 1/8W | |
| | FIL | TER | | | <u>C01</u> | <u>L</u> | | | |
| FI 702 | 1-235-612-11 1-235-611-11 | RDF /AGKH-1 | | L5 91 L601 L602 | 1-408-961-11 1-407-169-XX 1-407-169-XX | INDUCTOR | 1.8UH 100UH 100UH | | |
| | <u>IC</u> | | | L603 L606 | 1-407-169-XX 1-407-169-XX | INDUCTOR | 100UH 100UH | | |
| IC001 IC002 IC003 IC004 IC005 | 8-752-803-61 8-752-803-63 8-759-141-21 8-759-201-01 8-759-201-61 | IC CXP5048H-111Q IC CXP5048H-113Q IC UPD75104G-547-1B IC TC4066BF IC TC40H004F IC LB1640N | | L607 L608 L611 L620 | 1-407-169-XX 1-407-169-XX 1-407-169-XX 1-408-965-21 | INDUCTOR INDUCTOR | 100UH 100UH 100UH 3.9UH | | |
| IC007 | 8-759-801-60 | IC LB1640N | | | IC | LINK | | | |
| IC009 IC010 | 8-759-913-67 8-759-908-81 8-759-920-94 8-759-200-68 | IC MB3763PF IC MSM6411B-19RS | | PS 004 <u>/</u> 1 | . 1-532-685-00 . 1-532-637-00 . 1-532-685-00 | LINK, IC (1A |) | | |
| IC012 | | IC TC40H000F IC UPD7566G-506 | | | TRA | NSISTOR | | | |
| IC121 IC201 | 8-759-920-94 8-759-803-47 8-759-100-94 | IC MSM6411B-19RS IC LA5005M | | Q010 Q011 Q012 | 8-729-901-01 8-729-901-01 8-729-901-01 | TRANSISTOR D' | TC144EK TC144EK | | |
| IC205 IC206 IC207 | 8-759-929-55 8-759-932-07 8-759-701-43 8-759-202-45 8-759-802-79 | IC NJM3414D IC CX20114 | 1.00 | Q013 Q014 Q015 Q020 Q021 | 8-729-901-06 8-729-901-05 8-729-900-53 | TRANSISTOR D'TRANSISTOR D' | TC144EK TA144EK TA124EK TC114EK | | |
| IC210 IC211 | 8-752-003-50 8-759-925-66 | IC CX20035 | 2.7 | Q022 Q023 | 8-729-901-05 8-729-302-74 | TRANSISTOR D | | | |
| IC212 IC213 | 8-759-701-36 8-759-201-01 8-759-201-00 | IC NJM3403AM IC TC4066BF | | Q054 Q055 Q060 | 8-729-901-06 | TRANSISTOR D | TC144EK TA144EK | | |
| IC216 IC217 IC218 | 8-759-100-94 8-759-200-81 8-759-200-81 8-759-200-81 | IC TC4053BF IC TC4053BF IC TC4053BF | | Q070 Q071 Q080 Q081 | 8-729-901-01 8-729-374-02 8-729-901-01 8-729-901-01 | TRANS ISTOR DETRANS ISTOR DETRANS ISTOR DETRANS ISTOR DETARMS ISTOR DETA | SB740 TC144EK | | |
| | 8-759-100-94 8-759-009-51 | | | Q082 Q083 | 8-729-100-66 | TRANSISTOR DI | SC1623 | | |
| IC500 IC501 | 8-759-141-04 8-759-200-81 8-759-207-74 | IC UPD75106G-529-1B IC TC4053BF | | Q084 Q085 Q086 Q087 | 8-729-901-01 8-729-901-01 8-729-100-76 8-729-901-01 | TRANSISTOR DI TRANSISTOR 2S TRANSISTOR DI | TC144EK SA812 TC144EK | | |
| 10601 10602 | 8-752-321-97 8-759-911-18 | IC CXD1066Q IC CX23011 | | Q088 Q090 | 8-729-100-76 8-729-901-01 | TRANSISTOR 25 | | | |
| I C603 IC604 IC605 | 8-759-927-98 8-759-911-19 8-752-010-30 | IC MB8464-15LPF IC CX23012 | | Q0 91 Q0 98 Q0 99 Q1 03 | 8-729-901-01 8-729-901-01 8-729-901-06 8-729-901-06 | TRANSISTOR DI TRANSISTOR DI TRANSISTOR DI TRANSISTOR DI | TC144EK TA144EK | | |
| | | | | - | | | | | |

The components identified by mark \(\frac{\hat{\Lambda}}{\text{ or dotted line with mark }} \) are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque \hat{M} sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifé.

| No. | Part No. | Description | Remark | No. | Part No. | Description | | Remark |
|--------------------------------------|--|---|--------|--------------------------------------|--|--|----------------------|---|
| Q120 Q121 Q122 Q123 Q201 | 8-729-901-01 8-729-901-01 | TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTA114EK | | Q282 Q285 Q286 Q287 Q288 | 8-729-901-06 8-729-901-01 8-729-901-01 | TRANSISTOR DTC1 TRANSISTOR DTC1 TRANSISTOR DTC1 TRANSISTOR DTC1 TRANSISTOR DTC1 | 14EK 14EK 14EK | |
| Q202 Q203 Q204 Q205 Q206 | 8-729-400-82 8-729-100-66 8-729-100-66 | TRANSISTOR DTC114EK TRANSISTOR 2SD1266-P TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 TRANSISTOR 2SB1133-R | | Q289 Q390 Q401 Q470 Q471 | 8-729-901-01 | TRANSISTOR DTC1- TRANSISTOR DTC1- TRANSISTOR DTC1- TRANSISTOR 2SA8 TRANSISTOR DTC1- | 14EK 14EK 12 | |
| Q207 Q208 Q209 Q210 Q211 | 8-729-100-76 8-729-400-82 8-729-901-01 | TRANSISTOR DTA144EK TRANSISTOR 2SA812 TRANSISTOR 2SD1266-P TRANSISTOR DTC144EK TRANSISTOR DTC144EK | | Q472 Q485 Q491 Q492 Q493 | 8-729-901-06 8-729-901-06 8-729-901-06 | TRANSISTOR DTC1- TRANSISTOR DTA1- TRANSISTOR DTA1- TRANSISTOR DTA1- TRANSISTOR DTC1- | 14EK 14EK 14EK | |
| Q212 Q213 Q214 Q215 Q226 | 8-729-100-67 8-729-901-01 8-729-901-01 | TRANSISTOR 2SA1385-Z-L TRANSISTOR 2SC1623 TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK | | Q500 Q501 Q502 Q591 Q601 | 8-729-901-01 | TRANSISTOR DTC14 TRANSISTOR DTC14 TRANSISTOR DTC14 TRANSISTOR 2SC16 TRANSISTOR 2SC16 | 4EK 14EK 523 | |
| Q227 Q228 Q229 Q230 Q233 | 8-729-901-01 8-729-901-06 | TRANSISTOR DTA144EK TRANSISTOR DTC144EK TRANSISTOR DTA144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK | | Q603 Q604 Q605 Q606 Q698 | 8-729-901-06 | TRANSISTOR 2SC16 TRANSISTOR DTA14 TRANSISTOR DTC14 TRANSISTOR DTC14 TRANSISTOR DTA14 | 4EK 4EK 4EK | |
| Q235 Q236 Q237 Q238 Q239 | 8-729-901-01 8-729-901-06 8-729-901-01 | TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTA144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK | | 0701 0702 0703 0704 0705 | 8-729-100-66 8-729-901-01 8-729-100-76 | TRANSISTOR 2SC16 TRANSISTOR 2SC16 TRANSISTOR DTC14 TRANSISTOR 2SA81 TRANSISTOR 2SC16 | 23 4EK 2 | |
| Q240 Q242 Q243 Q244 Q245 | 8-729-901-01 | TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTA144EK | | Q706 Q707 Q708 Q709 Q710 | 8-729-100-66 8-729-100-66 8-729-100-76 | TRANSISTOR 2SC16 TRANSISTOR 2SC16 TRANSISTOR 2SC16 TRANSISTOR 2SA81 TRANSISTOR 2SC16 | 23 23 2 | |
| Q246 Q248 Q249 Q250 Q251 | 8-729-901-01 | TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTA144EK TRANSISTOR 2SC1623 TRANSISTOR 2SC1623 | | Q711 Q712 Q713 Q714 Q715 | 8-729-901-01 8-729-100-66 8-729-901-01 | TRANSISTOR 2SC16 TRANSISTOR DTC14 TRANSISTOR 2SC16 TRANSISTOR DTC14 TRANSISTOR 2SA81 | 4EK 23 4EK | |
| Q252 Q253 Q254 Q256 Q257 | 8-729-100-76 8-729-901-01 8-729-901-01 | TRANSISTOR 2SA812 TRANSISTOR 2SA812 TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTA144EK | | Q717 Q777 Q785 | 8-729-901-01 8-729-901-06 | TRANSISTOR DTC14 TRANSISTOR DTC14 TRANSISTOR DTA14 | 4EK | |
| Q258 Q260 Q261 Q262 Q263 | 8-729-901-06 8-729-302-74 8-729-302-74 8-729-302-74 8-729-901-06 | TRANSISTOR DTA144EK TRANSISTOR 2SD1366AC TRANSISTOR 2SD1366AC TRANSISTOR 2SD1366AC TRANSISTOR DTA144EK | | R001 R002 R003 R004 R005 | 1-216-073-00 1-216-073-00 1-216-073-00 | METAL GLAZE 10 METAL GLAZE 10 METAL GLAZE 10 METAL GLAZE 10 METAL GLAZE 10 | K 5% K 5% K 5% | 1/10W 1/10W 1/10W 1/10W 1/10W |
| Q264 Q280 Q281 | 8-729-901-04 8-729-100-66 8-729-901-01 | TRANSISTOR DTA114EK TRANSISTOR 2SC1623 TRANSISTOR DTC144EK | | R008 R010 R012 | 1-216-073-00 | METAL GLAZE 2. METAL GLAZE 10 METAL GLAZE 10 | | 1/10W 1/10W 1/10W |

SP-7

| No. | Part No. | Description | | | | Remark | No. | Part No. | Description | | | | Remark |
|--------------------------------------|--|---|----------------------------------|--|--------------------------------------|--------|--------------------------------------|--|---|--------------------------------------|----------------------------------|---|--------|
| R013 R014 R015 R018 R019 | 1-216-081-00 1-216-061-00 1-216-081-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 22K 3.3K 22K 10K 10K | 5% 1/ 5% 1/ 5% 1/ | 1 OW 1 OW 1 OW 1 OW 1 OW | | R156 R157 R158 R160 R161 | 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 1-216-057-00 | METAL GLAŻE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 10K 10K 2.2K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R022 R023 R024 R025 R026 | 1-216-073-00 1-216-073-00 1-216-041-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 470 10K 10K | 5% 1/ 5% 1/ 5% 1/ | IOW LOW IOW LOW LOW | | R162 R163 R170 R171 R200 | 1-216-073-00 1-216-073-00 1-216-061-00 1-216-097-00 1-249-448-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE CARBON | 10K 10K 3.3K 100K 1.2 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/4W | |
| R027 R028 R029 R030 R031 | 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K | 5% 1/5% 1/5% 1/5% 1/5% 1/5% 1/5% | LOW LOW | | R202 R203 R204 R205 R206 | 1-216-097-00 1-216-055-00 1-216-065-00 1-216-049-00 1-216-065-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 100K 1.8K 4.7K 1K 4.7K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R032 R033 R034 R050 R051 | 1-216-049-00 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 10K | 5% 1/1 5% 1/1 5% 1/1 5% 1/1 5% 1/1 | . OW . WO . . WO . | | R207 R208 R209 R212 R214 | 1-216-049-00 1-216-073-00 1-216-071-00 1-216-073-00 1-216-105-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 10K 8.2K 10K 220K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R052 R058 R070 R071 R072 | 1-216-073-00 1-216-073-00 1-216-081-00 1-216-051-00 1-247-712-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE CARBON | 10K 22K 1.2K | 5% 1/1 5% 1/1 5% 1/1 5% 1/1 5% 1/4 | . OW . WO . . WO . | | R215 R216 R217 R218 R219 | 1-216-113-00 1-216-667-11 1-216-667-11 1-216-059-00 1-216-113-00 | METAL GLAZE METAL CHIP METAL CHIP METAL GLAZE METAL GLAZE | 470K 4.7K 4.7K 2.7K 470K | 5% 0.50% 0.50% 5% 5% | | |
| R073 R079 R080 R081 R082 | 1-249-447-11 1-216-097-00 1-216-001-00 1-216-081-00 1-216-065-00 | CÁRBON METÁL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 100K 10 22K | 5% 1/5 5% 1/1 5% 1/1 5% 1/1 5% 1/1 | . OW . WO . . WO . | | R220 R221 R222 R223 R224 | 1-216-025-00 1-216-045-00 1-216-295-00 1-216-025-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 100 680 0 100 22K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R083 R084 R085 R086 R087 | 1-216-049-00 1-216-041-00 1-216-073-00 1-216-097-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 470 10K 100K | 5% 1/1 5% 1/1 5% 1/1 5% 1/1 5% 1/1 | OW OW | | R225 R226 R227 R228 R229 | 1-216-085-00 1-216-073-00 1-216-081-00 1-216-025-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 33K 10K 22K 100 22K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R088 R089 R090 R096 R097 | 1-216-089-00 1-216-073-00 1-216-073-00 1-216-081-00 1-216-113-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 22K | 5% 1/1 5% 1/1 5% 1/1 5% 1/1 5% 1/1 | OM OM OM | | R230 R231 R232 R233 R234 | 1-216-101-00 1-216-049-00 1-216-304-11 1-216-304-11 1-216-304-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 150K 1K 3.3 3.3 3.3 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R098 R099 R101 R102 R106 | 1-216-113-00 1-216-073-00 1-216-073-00 1-216-097-00 1-216-065-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 100K | 5% 1/1 5% 1/1 5% 1/1 5% 1/1 5% 1/1 | OM OM OM | | R237 R238 R239 R240 R241 | 1-216-049-00 1-216-069-00 1-216-675-11 1-216-683-11 1-216-667-11 | METAL GLAZE METAL GLAZE METAL CHIP METAL CHIP METAL CHIP | 1K 6.8K 10K 22K 4.7K | | 1/10W | |
| R120 R121 R123 R151 R152 | 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 10K 10K | 5% 1/1 5% 1/1 5% 1/1 5% 1/1 5% 1/1 | OW OW | | R242 R243 R244 R245 R246 | 1-216-683-11 1-216-669-11 1-216-681-11 1-216-121-00 1-216-681-11 | METAL CHIP METAL CHIP METAL CHIP METAL GLAZE METAL CHIP | 22K 5.6K 18K 1M 18K | 0.50% 0.50% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R153 R154 R155 | 1-216-073-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 10K | 5% 1/1 5% 1/1 5% 1/1 | OW | | R247 R248 R249 | 1-216-080-00 1-216-080-00 1-216-080-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 20K 20K 20K | 5% 5% 5% | 1/10W 1/10W 1/10W | |

| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | | Remark |
|--------------------------------------|---|---|--|---|-------------|--------------------------------------|--|---|--|----------------------------------|--|--------|
| R250 R251 R252 R253 R254 | 1 -216 -080 -00 1 -216 -080 -00 1 -216 -080 -00 1 -216 -080 -00 1 -216 -080 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 20K 5 20K 5 20K 5 | 5% 1/10 5% 1/10 5% 1/10 5% 1/10 5% 1/10 | 1 1 | R317 R319 R320 R321 R322 | 1-216-085-00 1-216-295-00 1-216-685-11 1-216-073-00 1-216-089-00 | METAL GLAZE METAL GLAZE METAL CHIP METAL GLAZE METAL GLAZE | 33K 0 27K 10K 47K | 5% 5% 0.50% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R255 R256 R257 R258 R259 | 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 5 10K 5 10K 5 | 5% 1/10 5% 1/10 5% 1/10 5% 1/10 5% 1/10 | 1 1 1 | R323 R324 R326 R327 R328 | 1-216-073-00 1-216-099-00 1-216-109-00 1-216-061-00 1-216-091-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 120K 330K 3.3K 56K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R260 R261 R262 R263 R264 | 1-216-073-00 1-216-073-00 1-216-080-00 1-216-097-00 1-216-033-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 5 20K 5 100K 5 | % 1/10 % 1/10 % 1/10 % 1/10 % 1/10 | i i | R329 R330 R331 R332 R333 | 1-216-117-00 1-216-117-00 1-216-081-00 1-216-113-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 680K 680K 22K 470K 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R266 R267 R268 R269 R270 | 1-216-073-00 1-216-073-00 1-216-081-00 1-216-049-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 5 22K 5 1K 5 | % 1/10 % 1/10 % 1/10 % 1/10 % 1/10 | ! ! | R334 R335 R336 R337 R338 | 1-216-113-00 1-216-049-00 1-216-081-00 1-216-073-00 1-216-121-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 470K 1K 22K 10K 1M | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R271 R280 R281 R282 R283 | 1-216-113-00 1-216-081-00 1-216-693-11 1-216-077-11 1-216-089-00 | METAL GLAZE METAL GLAZE METAL CHIP METAL CHIP METAL GLAZE | 22K 5 56K 0 15K 0 | % 1/100 % 1/100 0.50% 1/100 0.50% 1/100 % 1/100 | | R339 R340 R341 R342 R343 | 1-216-091-00 1-216-663-11 1-216-667-11 1-216-073-00 1-216-073-00 | METAL GLAZE METAL CHIP METAL CHIP METAL GLAZE METAL GLAZE | 56K 3.3K 4.7K 10K 10K | 5% 0.50% 0.50% 5% 5% | | |
| R284 R285 R286 R287 R288 | 1 -216 -081 -00 1 -216 -685 -11 1 -249 -441 -11 1 -216 -049 -00 1 -216 -049 -00 | METAL GLAZE METAL CHIP CARBON METAL GLAZE METAL GLAZE | 27K 0 100K 5 1K 5 | % 1/10 1.50% 1/10 % 1/4W % 1/10 % 1/10 | ! | R344 R345 R346 R347 R348 | 1-216-043-00 1-216-105-00 1-216-105-00 1-216-065-00 1-216-089-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 560 220K 220K 220K 4.7K 47K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R290 R292 R293 R294 R295 | 1 -216 -073 -00 1 -216 -295 -00 1 -216 -073 -00 1 -216 -073 -00 1 -216 -103 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 0 5 10K 5 10K 5 | % 1/10\% 1/10\% 1/10\% 1/10\% 1/10\% 1/10\% | ! ! ! | R349 R350 R351 R352 R353 | 1-216-049-00 1-216-065-00 1-216-073-00 1-216-685-11 1-216-663-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL CHIP METAL CHIP | 1K 4.7K 10K 27K 3.3K | 5% 5% 5% 0.50% 0.50% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R296 R297 R298 R299 R300 | 1-216-121-00 1-216-097-00 1-216-049-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 100K 5 1K 5 10K 5 | % 1/100 % 1/100 % 1/100 % 1/100 % 1/100 | ! ! | R354 R355 R356 R357 R358 | 1-216-691-11 1-216-089-00 1-216-697-11 1-216-695-11 1-216-663-11 | METAL CHIP METAL GLAZE METAL CHIP METAL CHIP METAL CHIP | 47K 47K 82K 68K 3.3K | 5% 0.50% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R303 R305 R306 R307 R308 | 1 -216 -073 -00 1 -216 -085 -00 1 -216 -077 -00 1 -216 -043 -00 1 -216 -043 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 33K 5 15K 5 | % 1/10v % 1/10v % 1/10v % 1/10v % 1/10v | | R359 R360 R361 R362 R363 | 1-216-693-11 1-216-073-00 1-216-089-00 1-216-073-00 1-216-073-00 | METAL CHIP METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 5 6K 10K 4 7K 10K 1 0K | 0.50% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R309 R310 R311 R312 R313 | 1-216-073-00 1-216-043-00 1-216-113-00 1-216-113-00 1-216-061-00 | | 10K 5 560 5 470K 5 470K 5 3.3K 5 | % 1/10\ % 1/10\ | ! ! ! | R364 R365 R366 R367 R368 | 1-216-091-00 1-216-097-00 1-216-105-00 1-216-089-00 1-216-085-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 56K 100K 220K 47K 33K | 5% 5% 5% 5% 5% | 1/10W. 1/10W 1/10W 1/10W 1/10W | |
| R314 R315 R316 | 1 -216 -073 -00 1 -216 -085 -00 1 -216 -101 -00 | METAL GLAZE METAL GLAZE METAL GLAZE | 33K 5 | % 1/100 % 1/100 % 1/100 | 1 | R370 R371 R372 | 1-216-097-00 1-216-073-00 1-216-681-11 | METAL GLAZE METAL GLAZE METAL CHIP | 100K 10K 18K | 5% 5% 0.50% | 1/10W 1/10W 1/10W | |

SP-7

| No. | Part No. | Description | | | | Remark . | No. | Part No. | Descr | iption | | | | Remark |
|--------------------------------------|---|---|---------------------------|-------------------------------|--------------------------------------|----------|--------------------------------------|--|---|-------------------------|-------------------------------------|-------------------------------|---|--------|
| R373 R375 R376 R377 R378 | 1-216-073-00 1-216-697-11 1-216-105-00 1-216-105-00 1-216-073-00 | METAL GLAZE METAL CHIP METAL GLAZE METAL GLAZE METAL GLAZE | 82K 220K 220K | 0.50% 1/ 5% 1/ 5% 1/ | /10W /10W /10W /10W /10W | | R518 R519 R530 R591 R592 | 1-216-073-00 1-216-085-00 1-216-081-00 1-216-095-00 1-216-097-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 10K 33K 22K 82K 100K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R380 R381 R382 R383 R384 | 1-216-113-00 1-216-113-00 1-216-101-00 1-216-683-11 1-216-667-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL CHIP METAL CHIP | 470K 5 150K 5 22K 0 | 5% 1/ | | | R593 R595 R596 R607 R608 | 1-216-057-00 1-216-067-00 1-216-067-00 1-216-045-00 1-216-097-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 2.2K 5.6K 5.6K 680 100K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R385 R386 R388 R390 R391 | 1-216-683-11 1-216-667-11 1-216-073-00 1-216-073-00 1-216-097-00 | METAL CHIP METAL CHIP METAL GLAZE METAL GLAZE METAL GLAZE | 4.7K (10K 5 10K 5 | 5% 1/ | | | R609 R610 R611 R612 R614 | 1-216-049-00 1-216-049-00 1-216-001-00 1-216-053-00 1-216-045-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 1K 1K 10 1.5K 680 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R392 R395 R396 R397 R398 | 1-216-065-00 1-216-073-00 1-216-699-11 1-216-685-11 1-216-109-00 | METAL GLAZE METAL GLAZE METAL CHIP METAL CHIP METAL GLAZE | 10K 5 100K 0 27K 0 | 5% 1/ 0.50% 1/ 0.50% 1/ | | | R615 R616 R617 R618 R619 | 1-216-051-00 1-216-049-00 1-216-073-00 1-216-071-00 1-216-051-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 1.2K 1K 10K 8.2K 1.2K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R399 R401 R403 R404 R405 | 1-216-073-00 1-216-073-00 1-216-295-00 1-216-049-00 1-216-063-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 5 0 5 1K 5 | 5% 1/ 5% 1/ 5% 1/ | 10W 10W 10W 10W 10W | | R620 R621 R622 R623 R624 | 1-216-645-11 1-216-073-00 1-216-077-00 1-216-077-00 1-216-049-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 560 10K 15K 15K 1K | 0.50% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R406 R408 R461 R462 R470 | 1-216-295-00 1-216-115-00 1-216-097-00 1-216-085-00 1-216-109-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 560K 5 100K 5 33K 5 | 5% 1/ 5% 1/ 5% 1/ | 10W 10W 10W 10W 10W | | R625 R626 R627 R628 R632 | 1-216-033-00 1-216-061-00 1-216-081-00 1-216-079-00 1-216-085-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 220 3.3K 22K 18K 33K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R471 R472 R473 R474 R475 | 1 -216 -109 -00 1 -216 -109 -00 1 -216 -097 -00 1 -216 -049 -00 1 -216 -097 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 330K 5 100K 5 1K 5 | 5% 1/ 5% 1/ 5% 1/ | 10W 10W 10W 10W 10W | | R633 R634 R635 R636 R637 | 1-216-085-00 1-216-085-00 1-216-029-00 1-216-065-00 1-216-069-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 33K 33K 150 4.7K 6.8K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R476 R485 R486 R492 R493 | 1-216-073-00 1-216-091-00 1-216-073-00 1-216-105-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 56K 5 10K 5 220K 5 | 5% 1/ 5% 1/ 5% 1/ | 10W 10W 10W 10W 10W | | R638 R640 R641 R650 R652 | 1-216-069-00 1-216-073-00 1-216-085-00 1-216-049-00 1-216-109-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 6.8K 10K 33K 1K 330K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R494 R502 R504 R505 R506 | 1 -216 -085 -00 1 -216 -073 -00 1 -216 -061 -00 1 -216 -061 -00 1 -216 -061 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 5 3.3K 5 3.3K 5 | 5% 1/ 5% 1/ 5% 1/ | 10W 10W 10W 10W 10W | | R653 R660 R661 R662 R664 | 1-216-109-00 1-216-073-00 1-216-073-00 1-216-033-00 1-216-073-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 330K 10K 10K 220 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R508 R509 R510 R511 R514 | 1-216-085-00 1-216-081-00 1-216-081-00 1-216-081-00 1-216-073-00 | METAL GLAZE | 22K 5 22K 5 22K 5 | 5% 1/1 5% 1/1 5% 1/1 | 10W 10W 10W 10W 10W | | R671 R672 R697 | 1-216-097-00 1-216-033-00 1-216-057-00 1-216-041-00 1-216-049-00 | METAL METAL METAL METAL METAL | GLAZE GLAZE GLAZE | 100K 220 2.2K 470 1K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R515 R516 R517 | 1-216-073-00 1-216-073-00 1-216-049-00 | METAL GLAZE | 10K 5 | % 1/: | 1 OW 1 OW 1 OW | | R701 | 1-216-049-00 1-216-105-00 1-216-081-00 | METAL METAL METAL | GLAZE | 1K 220K 22K | 5% 5% 5% | 1/10W 1/10W 1/10W | |

| Part No. Description Part No. Description Part No. Part | | | | | | | | | | | | | | |
|--|----------------------|--|---|----------------------|----------------|-------------------------|--------|----------------------------------|--|--|--|-------------------------------------|-------------------------|--------|
| 1-215-097-00 METAL GLAZE 100K 55 1/10M 8705 1-216-097-00 METAL GLAZE 10K 55 1/10M 8705 1-216-097-00 METAL GLAZE 10K 55 1/10M 8707 1-216-091-00 METAL GLAZE 10K 55 1/10M 8707 1-216-091-00 METAL GLAZE 10K 55 1/10M 8708 1-216-09 | No. | Part No. | Description | | | | Remark | No. | Part No. | Description | | | | Remark |
| 1-216-097-00 METAL GLAZE 100K 5% 1/10W R002 1-216-099-00 METAL GLAZE 1K 5% 1/10W R011 1-216-097-00 METAL GLAZE 1K 5% 1/10W R012 1-216-097-00 METAL GLAZE 1K 5% 1/10W R013 1-216-097-00 METAL GLAZE 1K 5% 1/10W | R704 R705 R706 | 1-216-097-00 1-216-079-00 1-216-117-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 100K 18K 680K | 5% 5% 5% | 1/10W 1/10W 1/10W | | R764 R770 R785 | 1-216-073-00 1-216-121-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 10K 1M 1K | 5% 5% 5% | 1/10W 1/10W 1/10W | |
| R716 1-216-049-00 METAL GLAZE IX 5% 1/10W R807 1-216-049-00 METAL GLAZE IX 5% 1/10W R817 1-216-065-00 METAL GLAZE IX 5% 1/10W R817 1-216-065-00 METAL GLAZE IX 5% 1/10W R819 1-216-049-00 METAL GLAZE IX 5% | R709 R710 R711 | 1-216-097-00 1-216-089-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 100K 47K 10K | 5% 5% 5% | 1/10W 1/10W 1/10W | | R802 R803 R804 | 1-216-049-00 1-216-049-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 1K 1K 1K | 5% 5% 5% | 1/10W 1/10W 1/10W | |
| R720 | R715 R716 R717 | 1-216-049-00 1-216-065-00 1-216-061-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 1K 4.7K 3.3K | 5% 5% 5% | 1/10W 1/10W 1/10W | | R807 R808 R809 | 1-216-049-00 1-216-049-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 1K 1K 1K | 5% 5% 5% | 1/10W 1/10W 1/10W | |
| R726 1-216-045-00 METAL GLAZE 680 5% 1/10W R817 1-216-049-00 METAL GLAZE 18K 5% 1/10W R818 1-216-037-00 METAL GLAZE 330 5% 1/10W R818 1-216-037-00 METAL GLAZE 330 5% 1/10W R819 1-216-037-00 METAL GLAZE 220K R8733 1-216-051-00 METAL GLAZE 1/2 2/ | R720 R721 R722 | 1-216-085-00 1-216-081-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 33K 22K 1K | 5% 5% 5% | 1/10W 1/10W 1/10W | | R812 R813 R814 | 1-216-049-00 1-216-049-00 1-216-025-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 1K 1K 100 | 5% 5% 5% | 1/10W 1/10W 1/10W | |
| R730 1-216-039-00 METAL GLAZE 270 5% 1/10W R730 1-216-039-00 METAL GLAZE 13K 5% 1/10W RV202 1-228-998-00 RES, ADJ, METAL GLAZE 220K R732 1-216-057-00 METAL GLAZE 12K 5% 1/10W RV203 1-228-993-00 RES, ADJ, CARBON 4.7K R7204 1-216-051-00 METAL GLAZE 12K 5% 1/10W RV203 1-228-993-00 RES, ADJ, CARBON 4.7K RV204 1-228-993-00 RES, ADJ, CARBON 4.7K RV205 1-228-995-00 RES, ADJ, CARBON 4.7K RV206 1-228-995-00 RES, ADJ, CARBON 4.7K RV207 1-228-995-00 RES, ADJ, CARBON 22K RV207 1-228-995-00 RES, ADJ, METAL GLAZE 22K RV208 1-228-995-00 RES, ADJ, METAL GLAZE 22K RV208 1-228-995-00 RES, ADJ, CARBON 22K RV209 1-228-995-00 RES, ADJ, CARBON 4.7K RV209 1-228-995-00 RES, ADJ, METAL GLAZE 2.2K RV209 RV209 1-228-995-00 RES, ADJ, METAL GLAZE 2.2K RV209 1-2 | R725 R726 R727 | 1-216-045-00 1-216-073-00 1-216-077-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 680 10K 15K | 5% 5% 5% | 1/10W 1/10W 1/10W | | R817 R818 | 1-216-049-00 1-216-037-00 | METAL GLAZE METAL GLAZE | 1K 330 | 5% 5% | 1/10W 1/10W | |
| R730 1-216-039-00 METAL GLAZE 390 5% 1/10W RV201 1-228-998-00 RES, ADJ, METAL GLAZE 220K RV203 1-216-057-00 METAL GLAZE 13K 5% 1/10W RV202 1-228-993-00 RES, ADJ, CARBON 4.7K RV203 1-216-051-00 METAL GLAZE 1.2K 5% 1/10W RV204 1-228-993-00 RES, ADJ, CARBON 4.7K RV205 1-228-993-00 RES, ADJ, CARBON 4.7K RV205 1-228-993-00 RES, ADJ, CARBON 4.7K RV205 1-228-995-00 RES, ADJ, CARBON 4.7K RV205 1-228-995-00 RES, ADJ, CARBON 22K RV205 1-228-995-00 RES, ADJ, CARBON 22K RV205 1-228-995-00 RES, ADJ, CARBON 22K RV205 1-228-995-00 RES, ADJ, CARBON 22K RV205 1-228-995-00 RES, ADJ, CARBON 22K RV205 1-228-995-00 RES, ADJ, CARBON 22K RV205 1-228-995-00 RES, ADJ, CARBON 22K RV205 1-228-995-00 RES, ADJ, CARBON 22K RV205 1-228-995-00 RES, ADJ, CARBON 22K RV206 1-228-995-00 RES, ADJ, METAL GLAZE 22K RV206 1-228-995-00 RES, ADJ, METAL GLAZE 22K RV206 1-228-995-00 RES, ADJ, METAL GLAZE 22K RV206 1-228-995-00 RES, ADJ, METAL GLAZE 22K RV206 1-228-995-00 RES, ADJ, METAL GLAZE 22K RV206 1-228-993-00 RES, ADJ, METAL GLAZE 22 | D720 | 1.216 025 00 | METAL CLAZE | 070 | C.W | 1 /1 01/ | | | VAR: | ABLE RESISTOR | | | | |
| R734 1-216-049-00 METAL GLAZE 33K 5% 1/10W RV206 1-228-995-00 RES, ADJ, METAL GLAZE 22K R736 1-216-081-00 METAL GLAZE 22K 5% 1/10W RV207 1-228-995-00 RES, ADJ, CARBON 22K R737 1-216-049-00 METAL GLAZE 3.3K 5% 1/10W RV208 1-228-995-00 RES, ADJ, METAL GLAZE 22K R738 1-216-061-00 METAL GLAZE 3.3K 5% 1/10W RV209 1-228-999-00 RES, ADJ, METAL GLAZE 22K R740 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W RV210 1-228-993-00 RES, ADJ, METAL GLAZE 4.7K R741 1-216-061-00 METAL GLAZE 3.3K 5% 1/10W RV210 1-228-991-00 RES, ADJ, METAL GLAZE 2.2K R742 1-216-061-00 METAL GLAZE 3.3K 5% 1/10W RV215 1-228-991-00 RES, ADJ, METAL GLAZE 2.2K R741 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W RV216 1-228-991-00 RES, ADJ, METAL GLAZE 2.2K R741 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W RV216 1-228-991-00 RES, ADJ, METAL GLAZE 2.2K R741 1-216-065-00 METAL GLAZE 3.3K 5% 1/10W RV216 1-228-991-00 RES, ADJ, METAL GLAZE 100K R746 1-216-056-00 METAL GLAZE 2.2K 5% 1/10W RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV216 1-228-997-00 RES, ADJ, SOLID 2.2K RV216 1-228-998-00 RES, ADJ, SOLID 100K RV216 1-228-998-00 RES, ADJ, SOLID 100K RV216 1-228-998-00 RES, ADJ, SOLID 100K RV216 1-228-998-00 RES, ADJ, CARBON 47K RV216 1-228-998-00 RES, ADJ, SOLID 100K RV216 1-228-998-00 RES, ADJ, CARBON 47K RV216 1-228-998-00 RES, ADJ, SOLID 100K RV216 1-228-999-00 RES, ADJ, SOLID 100K RV216 1-228-998-00 RES, ADJ, SOLID 100K RV218 1-228-998-00 RES, ADJ, SOLID 100K RV218 1-228-999-00 RES, ADJ, SOLID 100K RV218 1-228-999-00 RES, ADJ, SOLID 100K RV218 1-228-9 | R730 R731 R732 | 1-216-039-00 1-216-076-00 1-216-057-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 390 13K 2.2K | 5% 5% 5% | 1/10W 1/10W 1/10W | | RV202 RV203 RV204 | 1-228-998-00 1-228-993-00 1-228-993-00 | RES, ADJ, META RES, ADJ, CARI RES, ADJ, CARI | AL GLAZ BON 4. 1 BON 4. 1 | ZE 2201 7K 7K | Κ | |
| R740 1-216-061-00 METAL GLAZE 4.7K 5% 1/10W R741 1-216-061-00 METAL GLAZE 3.3K 5% 1/10W R742 1-216-061-00 METAL GLAZE 3.3K 5% 1/10W RV215 1-228-991-00 RES, ADJ, CARBON 4.7K RV216 1-228-991-00 RES, ADJ, METAL GLAZE 2.2K RV216 1-228-991-00 RES, ADJ, METAL GLAZE 2.2K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 2.2K RV216 1-228-997-00 RES, ADJ, METAL GLAZE 2.2K RV217 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV218 1-216-065-00 METAL GLAZE 18K 5% 1/10W RV218 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV218 1-228-997-00 RES, ADJ, METAL GLAZE 100K RV218 1-228-997-00 RES, ADJ, SOLID 2.2K RV216 1-228-997-00 RES, ADJ, SOLID 2.2K RV217 1-228-997-00 RES, ADJ, SOLID 2.2K RV218 1-228-997-00 RES, ADJ, SOLID 2.2K RV218 1-228-997-00 RES, ADJ, SOLID 100K RV601 1-230-521-11 RES, ADJ, SOLID 10K RV601 1-230-521-11 RES, ADJ, SOLID 10K RV602 1-230-522-11 RES, ADJ, SOLID 10K RV604 1-230-523-11 RES, ADJ, SOLID 10K RV701 1-228-996-00 RES, ADJ, CARBON 47K RV701 1-228-996-00 RES, ADJ, CARBON 47K RV701 1-228-996-00 RES, ADJ, CARBON 47K RV701 1-228-996-00 RES, ADJ, SOLID 10K RV701 1-228-996-0 | R735 R736 R737 | 1-216-085-00 1-216-081-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 33K 22K 1K | 5% 5% 5% | 1/10W 1/10W 1/10W | | RV206 RV207 RV208 RV209 | 1-228-995-00 1-228-995-00 1-228-995-00 1-228-999-00 | RES, ADJ, MET/ RES, ADJ, CARE RES, ADJ, MET/ RES, ADJ, CARE | AL GLAZ BON 22k AL GLAZ BON 470 | ZE 22K C ZE 22K OK | | |
| R744 1-216-079-00 METAL GLAZE 18K 5% 1/10W R745 1-216-085-00 METAL GLAZE 33K 5% 1/10W R746 1-216-056-00 METAL GLAZE 2K 5% 1/10W R747 1-216-057-00 METAL GLAZE 2K 5% 1/10W R748 1-216-051-00 METAL GLAZE 2.2K 5% 1/10W R748 1-216-051-00 METAL GLAZE 1.2K 5% 1/10W R750 1-216-049-00 METAL GLAZE 1K 5% 1/10W R750 1-216-069-00 METAL GLAZE 1K 5% 1/10W R751 1-216-057-00 METAL GLAZE 1K 5% 1/10W R752 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W R753 1-216-069-00 METAL GLAZE 2.2K 5% 1/10W R751 1-216-057-00 METAL GLAZE 3.2K 5% 1/10W R752 1-216-057-00 METAL GLAZE 3.2K 5% 1/10W R753 1-216-057-00 METAL GLAZE 3.2K 5% 1/10W R751 1-2567-346-11 OSCILLATOR, CERAMIC (5MHz) R752 1-216-057-00 METAL GLAZE 5.6K 5% 1/10W R751 1-257-841-11 OSCILLATOR, CERAMIC (660KHz) R752 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R753 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R751 1-257-841-11 OSCILLATOR, CRYSTAL R752 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R751 1-257-841-11 OSCILLATOR, CRYSTAL R752 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R751 1-257-841-11 OSCILLATOR, CRYSTAL R752 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R751 1-257-841-11 OSCILLATOR, CRYSTAL R753 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R751 1-257-841-11 OSCILLATOR, CRYSTAL R753 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R751 1-257-841-11 OSCILLATOR, CRYSTAL | R740 R741 R742 | 1-216-065-00 1-216-061-00 1-216-061-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 4.7K 3.3K 3.3K | 5% 5% 5% | 1/10W 1/10W 1/10W | | RV212 RV215 RV216 RV217 | 1-228-993-00 1-228-991-00 1-228-991-00 1-228-997-00 | RES, ADJ, CARE RES, ADJ, META RES, ADJ, META RES, ADJ, META | BON 4.7 AL GLAZ AL GLAZ | 7K ZE 2.21 ZE 2.21 ZE 1001 | ((| |
| R750 1-216-049-00 METAL GLAZE 1K 5% 1/10W R750 1-216-049-00 METAL GLAZE 1K 5% 1/10W R753 1-216-069-00 METAL GLAZE 6.8K 5% 1/10W R754 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W R755 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W R759 1-216-073-00 METAL GLAZE 2.2K 5% 1/10W R759 1-216-073-00 METAL GLAZE 10K 5% 1/10W R750 1-216-073-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-057-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-057-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-057-00 METAL GLAZE 5.6K 5% 1/10W | R745 R746 R747 | 1-216-085-00 1-216-056-00 1-216-057-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 33K 2K 2.2K | 5% 5% 5% | 1/10W 1/10W 1/10W | - | RV601 RV602 RV603 RV604 | 1-230-521-11 1-230-522-11 1-230-527-11 1-230-523-11 | RES, ADJ, SOLI RES, ADJ, SOLI RES, ADJ, SOLI RES, ADJ, SOLI | D 2.2k D 4.7k D 100k D 10K | ((| | |
| R753 1-216-069-00 METAL GLAZE 6.8K 5% 1/10W R754 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W R755 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W R759 1-216-073-00 METAL GLAZE 10K 5% 1/10W R759 1-216-073-00 METAL GLAZE 10K 5% 1/10W R750 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W R750 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W | | | | | | | İ | | | | T/N | • | | |
| R754 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W X001 1-567-346-11 OSCILLATOR, CERAMIC (5MHz) R755 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W X002 1-567-121-00 VIBRATOR, CRYSTAL X080 1-567-192-11 OSCILLATOR, CERAMIC (4MHz) X080 1-567-192-11 OSCILLATOR, CERAMIC (4MHz) X120 1-527-841-11 OSCILLATOR, CERAMIC (660KHz) X120 1-527-841-11 OSCILLATOR, CERAMIC (660KHz) X201 1-567-700-21 VIBRATOR, CRYSTAL | | | | | | | | | CRYS | TAL | | | | |
| R755 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W X002 1-567-121-00 VIBRATOR, CRYSTAL X080 1-567-192-11 OSCILLATOR, CERAMIC (4MHz) R759 1-216-073-00 METAL GLAZE 10K 5% 1/10W X120 1-527-841-11 OSCILLATOR, CERAMIC (660KHz) R760 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W X201 1-567-700-21 VIBRATOR, CRYSTAL | R754 | | | | | | ľ | X001 | 1-567-346-11 | OSCILLATOR, CF | RAMIC | (5MHz) |) | |
| R759 1-216-073-00 METAL GLAZE 10K 5% 1/10W X120 1-527-841-11 OSCILLATOR, CERAMIC (660KHz) R760 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W X201 1-567-700-21 VIBRATOR, CRYSTAL | R755 | | | | | | | X002 | 1-567-121-00 | VIBRATOR, CRYS | TAL | , , | • | |
| | R760 | 1-216-067-00 | METAL GLAZE | 5.6K | 5% | 1/10W | | X120 | 1-527-841-11 | OSCILLATOR, CE | RAMIC | | | |

SP-7 DM-18 AU-54

| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | Remark |
|----------------------|--|---|--------------------|---------------------------------|------------|----------------------|--|---|-------------------------------|-------------------------|-------------------|
| X600 | 1-567-419-11 | VIBRATOR, LI | THIUM TAN | TALATE | | R009 R010 | 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE | 10K 5% 10K 5% | 1/10W 1/10W | |
| | ****** | | | | ****** | R011 R012 | 1-216-059-00 1-216-222-00 | METAL GLAZE METAL GLAZE | 2.7K 5% 10K 5% | 1/10W 1/8W | |
| | *A-7061-073-A | DM-18 BOARD | | | | R013 | 1-216-049-00 | METAL GLAZE | 1K 5% | 1/10W | |
| | CAP | ACITOR | | | | R014 R015 R016 | 1-216-085-00 1-216-073-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE | 33K 5% 10K 5% 10K 5% | 1/10W 1/10W 1/10W | |
| C001 C002 | 1-163-021-00 1-130-483-00 | CERAMIC CHIP | 0.01MF 0.01MF | 5% | 50V 50V | R017 R018 | 1-216-073-00 1-216-057-00 1-216-077-00 | METAL GLAZE METAL GLAZE | 2.2K 5% 15K 5% | 1/10W 1/10W | |
| C003 C004 | 1-130-491-00 1-130-491-00 | MYLAR | 0.047MF 0.047MF | 5% 5% | 50V 50V | R019 | 1-216-206-00 | METAL GLAZE | 2.2K 5% | 1/8W | |
| C005 C006 | 1-126-157-11 1-163-038-00 | CERAMIC CHIP | 10MF | 20% | 16V 25V | R026 R030 | 1-216-684-11 1-216-073-00 | METAL CHIP METAL GLAZE | 24K 0.50 10K 5% | 0% 1/10W 1/10W | |
| C007 C008 | | CERAMIC CHIP | | 20% | 25V 16V | ***** | ***** | ***** | ***** | ***** | ***** |
| C009 C010 | | ELECT | 47MF 2.2MF | 20% 20% | 10V 50V | | *A-7061-728-A | AU-54 BOARD | | | |
| C011 | 1-124-282-00 | ELECT | 22MF | 20% | 16V | : | | |), MK-2 Boar | | |
| | CON | NECTOR | | | | | BAND PAS | NR-6 Board(| 10601).) | | |
| CN001 | 1-563-311-11 | CONNECTOR, B | OARD TO BO | ARD 10P | | BPF 801 | 1-235-517-11 | | PASS (230K) | IZ) | |
| | <u>D10</u> | <u>DE</u> | | | | | 1-235-517-11 | | | | |
| D001 D009 | 8-719-801-45 8-719-801-45 | DIODE 1SS187 | | | | | | ACITOR | | | 500 |
| D010 | 8-719-101-23 | D10DE 155123 | | | | C101 C211 C213 | 1-163-075-00 1-124-443-00 1-124-443-00 | CERAMIC CHIP ELECT ELECT | 0.04/MF 100MF 100MF | 20% 20% | 50V 10V 10V |
| 10001 | <u>IC</u> 8-759-937-25 | IC BA6303 | | | | C214 C216 | 1-163-075-00 1-163-075-00 | CERAMIC CHIP | 0.047MF | 20% | 50V 50V |
| IC002 IC003 | 8-759-132-40 | IC UPC324C | 3 | | | C218 | 1-124-443-00 | ELECT | 100MF | 20% | 100 |
| | JUM | PER RESISTOR | | | , | C219 C220 | 1-124-443-00 1-124-443-00 | ELECT | 100MF 100MF | 20% 20% | 10V 10V |
| JR001 JR002 | 1 -216 -295 -00 1 -216 -295 -00 | METAL GLAZE METAL GLAZE | 0 5% 0 5% | | | C226 C227 | 1 -163 -075 -00 1 -163 -075 -00 | CERAMIC CHIP CERAMIC CHIP | | | 50V 50V |
| JR003 JR004 | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 5% | 1/10 | į | C305 C306 | 1-124-499-11 1-163-075-00 | ELECT CERAMIC CHIP | 1MF 0.047MF | 20% | 50V 50V |
| JR005 | 1-216-296-00 | METAL GLAZE | 0 5% | | | C308 C309 | 1-130-495-00 1-163-101-00 | MYLAR CERAMIC CHIP | 0.1MF | 5% 5% | 50V 50V |
| JR006 JR007 | 1 -216 -296 -00 1 -216 -296 -00 | | 0 5% | | | C310 | 1-163-117-00 | CERAMIC CHIP | • | 5% | 50 V |
| | TRA | NS ISTOR | | | | C311 C312 C313 | 1-130-472-00 1-163-117-00 1-130-474-00 | MYLAR CERAMIC CHIP MYLAR | 0.0012MF 100PF 0.0018MF | 5% 5% 5% | 50V 50V 50V |
| Q007 | 8-729-901-01 | TRANSISTOR D | TC144EK | | | C314 C321 | 1-130-489-00 1-124-261-00 | MYLAR ELECT | 0.033MF 10MF | 5% 20% | 50V 50V |
| | - | ISTOR | | | | C331 | 1-163-023-00 | CERAMIC CHIP | 0.015MF | 10% | 50V |
| R001 R004 | 1-216-069-00 1-216-073-00 | METAL GLAZE | 6.8K 5% | 1/10v | 1 | C405 C406 | 1-124-499-11 1-163-075-00 | ELECT CERAMIC CHIP | | 20% | 50V 50V |
| R005 R006 R007 | 1-216-083-00 1-216-689-11 1-216-691-11 | METAL GLAZE METAL CHIP METAL CHIP | | 1/10W 50% 1/10W 50% 1/10W | l l | C408 C409 | 1-130-495-00 1-163-101-00 | MYLAR CERAMIC CHIP | 0.1MF 22PF | 5% 5% | 50V 50V |
| R008 | 1-216-089-00 | | 47K 5% | | | C410 C411 | 1-163-117-00 1-130-472-00 | CERAMIC CHIP | 100PF 0.0012MF | 5% 5% | 50V 50V |
| | | | | | | | | | | | |

AU-54

| No. | Dant No | Description | | Domank | No | Dart No | Description | | | | Domank |
|--------------|-------------------------------------|--|------------|-------------|----------------|------------------------------|------------------------------|--------|----------|----------------|--------|
| No. | Part No. | | F.W | Remark | No. | Part No. | <u>Description</u> | | | | Remark |
| C412 C413 | 1-130-474-00 | CERAMIC CHIP 100PF MYLAR 0.0018MF | 5% 5% | 50V 50V | IC201 | 8-759-240-52 8-759-145-58 | IC 1C4052BP | | | | |
| C414 C421 | 1-130-489-00 1-124-261-00 | MYLAR 0.033MF ELECT 10MF | 5% 20% | 50V 50V | IC301 IC302 | 8-759-700-40 8-759-208-06 | IC NJ4560S IC TC4051BPHE | | | | |
| C431 | | CERAMIC CHIP 0.015MF | 10% | 50V | IC302 | 8-759-700-40 | IC NJM4560S | • | | | |
| C502 | 1-163-075-00 | CERAMIC CHIP 0.047MF | | 50V | IC304 | 8-759-700-40 | IC NJM4560S | | | | |
| C507 C701 | 1 -124 -499 -11 1 -124 -443 -00 | ELECT 1MF ELECT 100MF | 20% 20% | 50V 10V | IC401 | 8-759-700-40 8-759-208-06 | IC NJM4560S IC TC4051BPHB | | | | |
| C801 | 1-163-075-00 | CERAMIC CHIP 0.047MF | 20% | 50V | IC402 | 8-759-700-40 | IC NJM4560S | • | | | |
| C802 | 1-163-063-00 | CERAMIC CHIP 0.022MF | | 50V | IC404 | 8-759-700-40 | IC NJM4560S | | | | |
| C803 C804 | | CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF | | 50V 50V | | 8-759-200-81 8-759-200-81 | IC TC4053BP | | | | |
| C805 | 1-126-160-11 | ELECT 1MF | 20% | 50V | IC701 | 8-752-322-57 | IC CX23010 | | | | |
| C806 C821 | | CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF | | 50V 50V | IC 901 | 8-759-933-22 | IC BA3707 | | | | |
| C822 | | CERAMIC CHIP 0.022MF | | 50V | | JUM | PER RESISTOR | | | | |
| C823 | 1-163-075-00 | CERAMIC CHIP 0.047MF | | 50 V | | 1-216-295-00 | | 0 | 5% | 1/10W | |
| C824 C825 | 1-163-075-00 | CERAMIC CHIP 0.047MF ELECT 1MF | 20% | 50V 50V | | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 0 | 5% 5% | 1/10W 1/10W | |
| C826 | 1 -163 -075 -00 | CERAMIC CHIP 0.047MF | | 50V | | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 | 5% 5% | 1/10W 1/10W | |
| C840 | 1-124-446-11 | | 20% | 10V | | | | - | • | · | |
| C841 C901 | 1-163-063-00 | CERAMIC CHIP 0.022MF ELECT 0.47MF | 20% | 50V 50V | JR006 JR007 | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 0 | 5% 5% | 1/10W 1/10W | |
| C902 C903 | 1-163-015-00 1-124-589-11 | CERAMIC CHIP 0.0033MF | 10% 20% | 50V 10V | | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 0 | 5% 5% | 1/10W 1/10W | |
| | | | | | | 1-216-295-00 | METAL GLAZE | 0 | 5% 5% | 1/10W | |
| C904 C921 | 1 -124 -465 -00 1 -163 - 989 -11 | ELECT 0.47MF CERAMIC CHIP 0.033MF | 20% 10% | 50V 25V | JR011 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| C951 | 1-124-902-00 | | 20% | 50V | JR012 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| | CON | NECTOR | | | | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 0 | 5% 5% | 1/10W 1/10W | |
| CN201 | 1-506-470-11 | PIN, CONNECTOR 5P | | | JR017 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| CN202 | *1-506-469-11 | PIN, CONNECTOR 4P | | | JR018 | 1-216-295-00 | METAL GLAZE | 0 | 5% 5~ | 1/10W | |
| CN205 | 1-506-469-11 | PIN, CONNECTOR 6P PIN, CONNECTOR 4P | | | | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 0 | 5% 5% | 1/10W 1/10W | |
| CN207 | *1-506-467-11 | PIN, CONNECTOR 2P | | | | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 0 | 5% 5% | 1/10W 1/10W | |
| | | PIN, CONNECTOR 5P | | | | | | | • | • | |
| | | PIN, CONNECTOR 5P PIN, CONNECTOR 5P | | | JR023 JR025 | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 | 5% 5% | 1/10W 1/10W | |
| | | PIN, CONNECTOR 3P PIN, CONNECTOR 3P | | | JR026 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| | | | | | | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 | 5% 5% | 1/10W 1/10W | |
| CN901 | 1-506-467-11 | PIN, CONNECTOR 2P | | | JR029 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| | <u>D10</u> | <u>DE</u> | | | | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 | 5% 5% | 1/10W 1/10W | |
| D701 | 8-719-109-60 | DIODE RD2.7ES-B2 | | | JR032 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| | FIL | <u>TER</u> | | | | 1-216-295-00 | | 0 | 5% | 1/10W | |
| FL301 | 1 -235 -565 -21 | FILTER, LOW PASS (15KHz) | 1 | | | 1-216-295-00 1-216-295-00 | METAL GLAZE METAL GLAZE | 0 0 | 5% 5% | 1/10W 1/10W | |
| FL401 | 1-235-565-21 | FILTER, LOW PASS (15KHz) FILTER, BAND PASS (1.5MH | | | JR036 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| 1 201 | | TILICK, DAND PASS (1.5MM | 12) | | | 1-216-295-00 1-216-295-00 | | 0 0 | 5% 5% | 1/10W 1/10W | |
| | IC | | | | JR039 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| IC101 | 8-759-937-21 | IC CXD1078M | | | | 1-216-295-00 | | Ŏ. | 5% | 1/10W | |

| No. | Part No. | Description | | | Remark | No. | Part No. | Description | | | | Remark |
|--|---|---|----------------------------|---|--------|---|---|---|-------------------------------------|----------------------------|---|--------|
| JR041 JR042 JR043 JR044 JR045 | 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 | METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | | Q210 Q211 Q212 Q213 <u>↑</u> Q301 | 8-729-100-66 8-729-100-76 8-729-100-76 .8-729-177-32 8-729-602-00 | TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S | SA812 SA812 SD773 | 2 | | |
| JR046 JR047 JR053 JR054 JR055 | 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 1-216-296-00 | METAL GLAZE 0 METAL GLAZE 0 METAL GLAZE 0 METAL GLAZE 0 METAL GLAZE 0 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/8W | İ | Q302 Q401 Q402 Q502 Q701 | 8-729-100-66 8-729-602-00 8-729-100-66 8-729-901-01 8-729-100-66 | TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR D' TRANSISTOR 2S | 5K433C 5C1623 FC144Ek | ζ. | | |
| JR056 JR057 JR058 JR059 JR060 | 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 1-216-296-00 | METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O | 5% 5% 5% 5% 5% | 1/8W 1/8W 1/8W 1/8W 1/8W | | Q801 Q802 Q803 Q821 Q822 | 8-729-100-66 8-729-100-76 8-729-100-66 8-729-100-66 8-729-100-76 | TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S | A812 C1623 C1623 | | | , |
| JR061 JR062 JR063 | 1-216-296-00 1-216-296-00 1-216-296-00 | METAL GLAZE O METAL GLAZE O METAL GLAZE O | 5% 5% 5% | 1/8W 1/8W 1/8W | | Q823 Q901 | 8-729-100-66 8-729-100-76 | TRANSISTOR 2S TRANSISTOR 2S | | | | |
| JR064 JR065 | 1 -216 -296 -00 1 -216 -296 -00 | METAL GLAZE O METAL GLAZE O | 5% 5% | 1/8W 1/8W | | | RES | ISTOR | | | | |
| JR066 JR067 JR068 JR069 JR070 | 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 | METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O | 5% 5% 5% 5% 5% | 1/8W 1/8W 1/8W 1/8W 1/8W | | R102 R104 R107 R110 R113 | 1-216-073-00 1-216-081-00 1-216-073-00 1-216-073-00 1-216-044-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 22K 10K 10K 620 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| JR072 JR074 JR075 JR076 JR077 | 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 | METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O | 5% 5% 5% 5% 5% | 1/8W 1/8W 1/8W 1/8W 1/8W | | R201 R205 R206 R207 R210 | 1-216-061-00 1-216-097-00 1-216-097-00 1-216-097-00 1-216-085-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 3.3K 100K 100K 100K 33K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| JR078 JR079 JR080 JR081 JR082 | 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 | METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O | 5% 5% 5% 5% | 1/8W 1/8W 1/8W 1/8W 1/8W | | R211 R216 R217 R218 R220 | 1-216-073-00 1-216-097-00 1-216-097-00 1-216-097-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 10K 100K 100K 100K 22K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| JR083 JR084 JR085 JR086 JR087 | 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 1 -216 -296 -00 | METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O METAL GLAZE O | 5% 5% 5% 5% | 1/8W 1/8W 1/8W 1/8W 1/8W | | R221 R230 R233 R236 R237 | 1-216-089-00 1-216-061-00 1-216-069-00 1-216-071-00 1-216-073-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 3.3K 6.8K 8.2K 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| JR089 JR090 JR091 | | METAL GLAZE O METAL GLAZE O METAL GLAZE O | 5% 5% 5% | 1/8W 1/8W 1/8W | - | R238 R240 R241 R242 R244 | 1-216-061-00 1-216-061-00 1-216-074-00 1-216-061-00 1-216-081-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 3.3K 3.3K 11K 3.3K 22K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| | <u>C011</u> | <u>-</u> | | | | R305 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| L 921 | | NS IS TOR | | | | R307 R309 R310 R316 | 1-216-079-00 1-216-093-00 1-216-099-00 1-216-063-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 18K 68K 120K 3.9K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | |
| Q201 Q203 Q204 Q208 <u></u> Q209 | 8-729-100-66 8-729-901-01 8-729-113-32 | TRANSISTOR DTA144EI TRANSISTOR 2SC1623 TRANSISTOR DTC144EI TRANSISTOR 2SB733 TRANSISTOR 2SC1623 | | | | R319 R320 R321 R322 | 1-249-437-11 1-249-440-11 1-216-001-00 1-216-101-00 | CARBON CARBON METAL GLAZE METAL GLAZE | 47K 82K 10 150K | 5% 5% 5% | 1/4W 1/4W 1/10W 1/10W | |

The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque 🛕 sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

AU-54 AD-12

| | | | | | | | | • | | | | | |
|--------------------------------------|---|--|------------------------------------|----------------------------|--|--------|--------------------------------------|--|---|---------------------------------------|----------------------------|---|------------------------------------|
| No. | Part No. | Description | | | | Remark | No. | Part No. | Description | | | | Remark |
| R327 R330 R331 R332 R333 | 1 -216 -059 -00 1 -216 -053 -00 1 -216 -025 -00 1 -216 -095 -00 1 -247 -854 -11 | | 2.7K 1.5K 100 82K 9.1K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/4W | | R503 R505 R506 R562 R563 | 1-216-063-00 1-216-063-00 1-216-049-00 1-216-069-00 1-216-067-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 1K 6.8K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R334 R335 R336 R337 R338 | 1-249-393-11 1-249-414-11 1-247-860-11 1-216-065-00 1-249-423-11 | | 10 560 16K 4.7K 3.3K | 5% 5% 5% 5% 5% | 1/4W 1/4W 1/4W 1/1OW 1/4W | | R564 R565 R566 R570 R701 | 1-216-065-00 1-216-089-00 1-216-073-00 1-216-047-00 1-216-041-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 10K 820 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R339 R340 R345 R346 R347 | 1-249-423-11 1-247-844-11 1-249-427-11 1-216-025-00 1-216-748-11 | CARBON CARBON CARBON METAL GLAZE METAL GLAZE | 3.3K 3.6K 6.8K 100 39K | 5% 5% 5% 5% 5% | 1/4W 1/4W 1/4W 1/10W 1/10W | | R801 R802 R803 R804 R805 | 1-216-057-00 1-216-063-00 1-216-077-00 1-216-073-00 1-216-097-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 3.9K 15K 10K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R349 R350 R351 R360 R362 | 1-216-069-00 1-249-425-11 1-249-423-11 1-247-828-11 1-247-858-11 | METAL GLAZE CARBON CARBON CARBON CARBON | 6.8K 4.7K 3.3K 750 13K | 5% 5% 5% 5% 5% | 1/10W 1/4W 1/4W 1/4W 1/4W | | R806 R807 R808 R809 R821 | 1-216-063-00 1-216-074-00 1-216-053-00 1-216-041-00 1-216-057-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 11K 1.5K 470 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R363 R370 R407 R409 R410 | 1-249-432-11 1-216-059-00 1-216-079-00 1-216-093-00 1-216-099-00 | CARBON METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 18K 2.7K 18K 68K 120K | 5% 5% 5% 5% 5% | 1/4W 1/10W 1/10W 1/10W 1/10W | | R822 R823 R824 R825 R826 | 1-216-063-00 1-216-077-00 1-216-073-00 1-216-097-00 1-216-063-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 15K 10K 100K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R416 R419 R420 R421 R422 | 1-216-063-00 1-249-437-11 1-249-440-11 1-216-001-00 1-216-101-00 | METAL GLAZE CARBON CARBON METAL GLAZE METAL GLAZE | 3.9K 47K 82K 10 150K | 5% 5% 5% 5% 5% | 1/10W 1/4W 1/4W 1/10W 1/10W | | R827 R828 R829 R901 R902 | 1-216-074-00 1-216-047-00 1-216-041-00 1-216-073-00 1-216-066-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 820 5 470 5 10K 5 | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R427 R430 R431 R432 R433 | 1-216-059-00 1-216-053-00 1-216-025-00 1-216-095-00 1-247-854-11 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE CARBON | 2.7K 1.5K 100 82K 9.1K | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/4W | | R904 R905 R906 R907 R908 | 1-216-089-00 1-216-089-00 1-216-081-00 1-216-073-00 1-216-065-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 5 22K 5 10K 5 | 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W | |
| R435 R436 R437 R438 R439 | 1-249-414-11 1-247-860-11 1-216-065-00 1-216-061-00 1-249-423-11 | CARBON CARBON METAL GLAZE METAL GLAZE CARBON | 560 16K 4.7K 3.3K 3.3K | 5% 5% 5% 5% 5% | 1/4W 1/4W 1/10W 1/10W 1/4W | | R909 R951 ***** | 1-216-089-00 1-216-073-00 | METAL GLAZE METAL GLAZE | 10K 5 | 5% 5% **** | 1/10W 1/10W | ***** |
| R440 R445 R446 R447 R449 | 1 -247 -844 -11 1 -249 -427 -11 1 -216 -025 -00 1 -249 -436 -11 1 -216 -069 -00 | CARBON CARBON METAL GLAZE CARBON METAL GLAZE | 100 39K | 5% 5% 5% 5% 5% | 1/4W 1/4W 1/10W 1/4W 1/10W | | | A -7068-113-A *1-622-010-11 CAP/ | ****** | ******* | TE ** | | |
| R450 R451 R460 R462 R463 | 1-249-425-11 1-249-423-11 1-247-828-11 1-247-858-11 1-249-432-11 | CARBON CARBON CARBON CARBON CARBON | 4.7K 3.3K 750 13K 18K | 5% 5% 5% 5% 5% | 1/4W 1/4W 1/4W 1/4W 1/4W | | C701 C703 C705 C707 C709 | 1-124-638-11 1-163-117-00 1-124-638-11 1-126-157-11 | | 22MF 100PF 22MF 10MF 47MF | ! | 5% 20% 20% | 6.3V 50V 6.3V 16V 6.3V |
| R470 R501 R502 | 1 -216 -059 -00 1 -216 -075 -00 1 -216 -065 -00 | METAL GLAZE METAL GLAZE METAL GLAZE | 12K | 5% 5% 5% | 1/10W 1/10W 1/10W | | C710 C713 C715 | | CERAMIC CHIP ELECT ELECT | 0.01MF 100MF 100MF | | 20% | 50V 6.3V 6.3V |

AD-12 AF-20

| No. | Part No. | Description | | | Remark | , No. | Part No. | Description | | | Remark |
|------------------------------|--|----------------------------|------------------------|--------------------|----------------------------|------------------------------|--------------------------------|---------------------------------------|---------------------------|---------------|---------------------------------|
| C716 C717 C718 | 1-126-157-11 1-126-177-11 1-103-709-00 | ELECT | 10MF 100MF 220PF | 20% 20% 5% | 16V 6.3V 50V | | *A-7068-021-A | | , COMPLETE | | |
| C719 C720 | 1-163-021-00 | CERAMIC CHIP | 0.01MF | <i>5 p</i> a | 50V 50V | | *1-619-037-11 | | | | |
| C721 | 1-126-154-11 | ELECT | 47MF | 20% | 6.3V | | CAP | ACITOR | | | |
| C722 C751 C753 C755 | 1-124-638-11 | CERAMIC CHIP | 22MF | 20% 5% 20% | 50V 6.3V 50V 6.3V | C501 C502 C503 C504 | | CERAMIC CHIP CERAMIC CHIP ELECT | 0.01MF 680PF 0.47MF | 10% 20% | 50V 50V 50V 50V 50V |
| C757 | 1-126-157-11 | ELECT | 1 OMF | 20% | 16V | C505 | 1-163-145-00 | ., | | 10% | |
| | CON | NECTOR | | | | C506 C507 | 1-163-016-00 1-163-125-00 | | | 10% 5% | 50V 50V |
| CN701 | 1-563-533-11 | CONNECTOR B | DARD TO BO | ARD 15P | | C508 C509 | 1-164-161-11 1-126-177-11 | | 0.0022MF 100MF | 10% 20% | 50V 6.3V |
| | | | | | | C510 | 1-163-036-00 | | | 200 | 50V |
| | <u>IC</u> | | | | | C511 | 1-163-021-00 | | | | 50V |
| IC702 | 8-759-914-44 | IC TL431CLPB | | | | C512 C513 | 1-124-257-00 1-126-154-11 | | 2.2MF 47MF | 20% 20% | 50V 6.3V |
| | <u>C01</u> | <u>L</u> | | | | C514 | 1-126-094-11 | ELECT | 4.7MF | 20% | 25 V |
| L701 | 1-408-421-00 | INDUCTOR | 100UH | | | C515 | 1-163-133-00 | CERAMIC CHIP | 470PF | 5% | 50 V |
| | | ISTOR | | | | C516 C517 | 1-126-177-11 1-163-088-00 | | 100MF | 20% 0.25PF | 6.3V 50V |
| | | | | | | C518 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50 V |
| R701 R703 | 1-216-083-00 1-216-748-11 | | 27K 5% 39K 5% | 1/10W 1/10W | | C519 C520 | 1-163-125-00 1-163-079-00 | | | 5% 10% | 50V 25V |
| R711 | 1-216-057-00 | METAL GLAZE | 2.2K 5% | 1/10W | | | | | | • | |
| R713 R717 | 1-216-057-00 1-216-117-00 | | 2.2K 5% 680K 5% | 1/10W 1/10W | | C521 C522 | 1-163-020-00 1-163-137-00 | | | 10% 10% | 50V 50V |
| 1(7.27 | 1-210-117-00 | HETAL GLAZE | OUUK 5% | | | C523 | 1-126-160-11 | ELECT | 1MF | 20% | 50V |
| R718 R719 | 1-216-029-00 1-216-022-00 | | 150 5% 75 5% | 1/10W 1/10W | | C524 C525 | 1-126-157-11 1-126-157-11 | ELECT , | 10MF 10MF | 20% 20% | 16V 16V |
| R720 | 1-216-039-00 | METAL GLAZE | 390 5% | 1/10W | | | | | | | |
| R721 R722 | 1-216-049-00 1-216-653-11 | | 1K 5% | 1/10W 50% 1/10W | | C526 C527 | 1-124-638-11 1-126-177-11 | | 22MF 100MF | 20% 20% | 6.3V 6.3V |
| | * | | | | | C529 | 1-124-438-00 | ELECT | 1MF | 20% | 50V |
| R723 R724 | 1-216-661-11 1-215-485-00 | | 2.7K 0.5 | 50% 1/10W 1/6W | | C530 C531 | 1-163-021-00 1-126-177-11 | CERAMIC CHIP | 0.01MF 100MF | 20% | 50V 6.3V |
| R751 | 1-216-083-00 | METAL GLAZE | 27K 5% | 1/10W | | | | | | | |
| R753 R761 | 1-216-748-11 1-216-057-00 | METAL GLAZE METAL GLAZE | 39K 5% 2.2K 5% | 1/10W 1/10W | | C533 C534 | 1-163-015-00 1-163-109-00 | | | 10% 5% | 50V 50V |
| K/OI | 1-210-037-00 | METAL GLAZE | 2. ZN 3/0 | 1/10 | | C535 | 1-164-161-11 | | | 10% | 50V |
| R763 | 1-216-057-00 | METAL GLAZE | 2.2K 5% | 1/10W | | C536 C539 | 1-163-021-00 1-163-088-00 | | | 0.25PF | 50V 50V |
| | VAR | IABLE RESISTOR | <u> </u> | | | 0003 | | | | 0.00. | |
| RV701 | 1-228-995-00 | RES, ADJ, CA | RBON 22K | | | | CON | NECTOR | | | |
| RV703 RV705 | 1-228-991-00 1-228-999-00 | RES, ADJ, CAI | | | | | *1-564-788-11 *1-564-788-11 | | | | |
| RV751 RV753 | 1-228-995-00 | | RBON 22K | | | 011302 | 1C | . Ing Connecti | ZN 101 | | |
| ***** | ***** | ***** | ***** | ***** | ****** | 10501 | 8-752-013-71 | IC CX20137A | | ×. | |
| | | | | | | | COI | L | | | |
| | | | | | | | <u> </u> | _ | | | |

When indicating parts by reference number, please include the board name.

220UH

L501 1-408-948-00 INDUCTOR

AF-20 MK-2 NR-6

| No. | Part No. | Description | | | | Remark | No. | Part No. | Description | | | | Remark |
|--|---|---|--|--|---|---------------------------------|--|---|--|---|----------------|--|--|
| | TRA | NS IS TOR | | | | | | <u>C01</u> | INECTOR | | | | |
| 0502 0503 | 8-729-220-93 8-729-901-01 | TRANSISTOR 2 | | | | | CN803 | *1-564-788-11 | PIN, CONNECT | OR 10P | | | |
| | RES | ISTOR | | | | | | <u>IC</u> | | | | | |
| R501 R502 R503 | 1 -216 -065 -00 1 -216 -065 -00 1 -216 -065 -00 | METAL GLAZE | 4.7K 4.7K 4.7K | 5% | 1/10W 1/10W 1/10W | | IC821 | 8-759-913-62 8-759-913-62 8-759-206-68 | IC IR3NO5 | | | | |
| R504 R505 | 1-216-121-00 1-216-107-00 | METAL GLAZE | 1M 270K | 5% | 1/10W 1/10W | | | TRA | NS IS TOR | | | | |
| R506 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W | | Q851 | 8-729-119-78 | TRANSISTOR 2 | S C 2 7 8 5 H F | E | | |
| R507 R508 | 1-249-416-11 1-216-097-00 | CARBON METAL GLAZE | 820 100K | 5% | 1/4W 1/10W | | | RES | ISTOR | | | | |
| R509 R510 | 1-216-075-00 1-216-063-00 | METAL GLAZE METAL GLAZE | 12K 3.9K | 5% 5% | 1/10W 1/10W | | R801 R810 R812 | 1-249-398-11 1-249-421-11 1-249-436-11 | CARBON | 27 2.2K 39K | 5% 5% 5% | 1/4W 1/4W 1/4W | |
| R511 R512 | 1 -216 -057 -00 1 -216 -045 -00 | METAL GLAZE METAL GLAZE | 2.2K 680 | 5% | 1/10W 1/10W | | R830 R851 | 1-249-421-11 1-249-435-11 | CARBON CARBON | 2.2K 33K | 5% 5% | 1/4W 1/4W | |
| R513 R514 R515 | 1 -216 -059 -00 1 -216 -061 -00 1 -216 -061 -00 | METAL GLAZE METAL GLAZE METAL GLAZE | 2.7K 3.3K 3.3K | 5% | 1/10W 1/10W 1/10W | | R852 R853 | 1-249-435-11 1-249-441-11 | | 33K 100K | 5% 5% | 1/4W 1/4W | |
| R516 R517 | 1-216-059-00 1-216-073-00 | | 2.7K 10K | 5% 5% | 1/10W 1/10W | | | VAR | IABLE RESISTO | <u>R</u> | | | |
| R519 R520 R521 | 1-216-079-00 1-216-121-00 1-216-079-00 | METAL GLAZE METAL GLAZE | 18K 1M 18K | 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | | RV821 | 1-228-990-00 1-228-990-00 | RES, ADJ, CA | RBON 1K | | | |
| | | | | | | | | ***** | | ك مقد مقد مقد مقد مقد مقد | **** | | ****** |
| R522 | 1 -216 -097 -00 | METAL GLAZE | 100K | 5% | 1/10W | | | | **** | ******* | | | |
| R523 R524 | 1 -216 -089 -00 1 -216 -083 -00 | METAL GLAZE METAL GLAZE | 47K 27K | 5% 5% | 1/10W 1/10W | į | | *A-7060-913-A | | COMPLET | ΓΕ | | |
| R523 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | | | *A-7060-913-A | NR-6 BOARD, | COMPLET | ΓΕ | | |
| R523 R524 R525 R526 R527 R528 | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -057 -00 1 -216 -059 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 27K 18K 18K 2.2K 2.7K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W | | | *A-7060-913-A | NR-6 BOARD, ******** ACITOR ELECT | COMPLET | ΓΕ | 20% 20% | 6.3V 10V |
| R523 R524 R525 R526 | 1-216-089-00 1-216-083-00 1-216-079-00 1-216-079-00 1-216-057-00 1-216-059-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 27K 18K 18K 2.2K 2.7K 1K | 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W | | C601 C602 C603 C604 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-126-177-11 | NR-6 BOARD, *********** ACITOR ELECT ELECT ELECT ELECT ELECT | 100MF 47MF 100MF 100MF | ΓΕ ** | 20% 20% 20% 20% | 6.3V 10V 6.3V 6.3V |
| R523 R524 R525 R526 R527 R528 R530 | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -057 -00 1 -216 -059 -00 1 -216 -049 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE | 47K 27K 18K 18K 2.2K 2.7K 1K | 55% 55% 55% 55% 55% | 1/10W 1/10W 1/10W 1/10W 1/10W | | C601 C602 C603 C604 C605 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-126-177-11 1-130-490-11 | NR-6 BOARD, ******** ACITOR ELECT ELECT ELECT ELECT ELECT HYLAR | 100MF 47MF 100MF 100MF 0.039MF | ΓΕ ** | 20% 20% 20% 20% 20% | 6.3V 10V 6.3V 6.3V 50V |
| R523 R524 R525 R526 R527 R528 R530 | 1-216-089-00 1-216-083-00 1-216-079-00 1-216-079-00 1-216-057-00 1-216-059-00 1-216-049-00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE ABLE RESISTO RES, ADJ, CA | 47K 27K 18K 18K 2.2K 2.7K 1K R | 55% 55% 55% K | 1/10W 1/10W 1/10W 1/10W 1/10W | | C601 C602 C603 C604 C605 | *A-7060-913-A CAP 1-126-177-11 1-126-177-11 1-126-177-11 1-126-177-11 1-130-490-11 1-163-125-00 1-163-088-00 | NR-6 BOARD, *********** ACITOR ELECT ELECT ELECT ELECT HYLAR CERAMIC CHIP CERAMIC CHIP | 100MF 47MF 100MF 100MF 0.039MF 220PF 5PF | ΓΕ ** | 20% 20% 20% 20% 5% 10% 0.25PF | 6.3V 10V 6.3V 6.3V 50V 50V |
| R523 R524 R525 R526 R527 R528 R530 RV501 RV503 | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -057 -00 1 -216 -059 -00 1 -216 -049 -00 VAR 1 -228 -995 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE RES, ADJ, CA RES, ADJ, CA | 47K 27K 18K 18K 2.2K 2.7K 1K RBON 22I RBON 10I | 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W | **** | C601 C602 C603 C604 C605 C606 C607 C608 C609 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-126-177-11 1-130-490-11 1-163-125-00 1-163-088-00 1-130-479-00 1-163-020-00 | NR-6 BOARD, *********** ACITOR ELECT ELECT ELECT ELECT MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP | COMPLET ************************************ | TE ** | 20% 20% 20% 5% 10% 0.25PF 5% | 6.3V 10V 6.3V 6.3V 50V 50V 50V 50V |
| R523 R524 R525 R526 R527 R528 R530 RV501 RV503 | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -057 -00 1 -216 -059 -00 1 -216 -049 -00 VAR 1 -228 -995 -00 1 -228 -994 -00 | METAL GLAZE METAL | 47K 27K 18K 18K 2.2K 2.7K 1K RBON 22I RBON 10I | 5% 5% 5% 5% 5% 5% KK | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W | **** | C601 C602 C603 C604 C605 C606 C607 C608 C609 C610 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-130-490-11 1-163-125-00 1-163-088-00 1-130-479-00 1-163-020-00 1-124-257-00 | NR-6 BOARD, ******** ACITOR ELECT ELECT ELECT ELECT MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP ELECT | 100MF 47MF 100MF 100MF 0.039MF 220PF 5PF 0.0047M 0.0082M 2.2MF | TE ** | 20% 20% 20% 20% 5% 10% 0.25PF 5% 10% 20% | 6.3V 10V 6.3V 6.3V 50V 50V 50V 50V 50V 50V |
| R523 R524 R525 R526 R527 R528 R530 RV501 RV503 | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -057 -00 1 -216 -059 -00 1 -216 -049 -00 VAR 1 -228 -995 -00 1 -228 -994 -00 *********************************** | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE ARES, ADJ, CA *********************************** | 47K 27K 18K 18K 2.2K 2.7K 1K RBON 22I RBON 10I | 5% 5% 5% 5% 5% 5% KK | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W | **** | C601 C602 C603 C604 C605 C606 C607 C608 C609 C610 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-130-490-11 1-163-125-00 1-163-088-00 1-130-479-00 1-163-020-00 1-124-257-00 1-163-137-00 1-127-558-11 | NR-6 BOARD, ************ ACITOR ELECT ELECT ELECT ELECT MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP ELECT CERAMIC CHIP | COMPLET ************************************ | TE ** | 20% 20% 20% 20% 5% 10% 0.25PF 5% 10% 20% | 6.3V 10V 6.3V 6.3V 50V 50V 50V 50V 50V 50V 6.3V |
| R523 R524 R525 R526 R527 R528 R530 RV501 RV503 | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -059 -00 1 -216 -049 -00 VAR 1 -228 -995 -00 1 -228 -994 -00 ********************************** | METAL GLAZE METAL | 47K 27K 18K 18K 2.2K 2.7K 1K RBON 22I RBON 10H | 5% 5% 5% 5% 5% 5% KK KK | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W | | C601 C602 C603 C604 C605 C606 C607 C609 C610 C611 C612 C613 C616 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-130-490-11 1-163-125-00 1-163-088-00 1-130-479-00 1-163-020-00 1-124-257-00 1-127-558-11 1-127-558-11 1-127-558-11 | NR-6 BOARD, *********** ACITOR ELECT ELECT ELECT ELECT MYLAR CERAMIC CHIP CERAMIC CHIP ELECT CERAMIC CHIP ELECT CERAMIC CHIP ELECT ELECT CERAMIC CHIP ELECT CERAMIC CHIP ELECT ELECT ELECT SOLID ELECT ELECT | 100MF 47MF 100MF 100MF 0.039MF 220PF 5PF 0.0047M 0.0082M 2.2MF 10MF 0.22MF 100MF | TE ** | 20% 20% 20% 5% 10% 0.25PF 10% 20% 20% 20% 20% | 6.3V 10V 6.3V 50V 50V 50V 50V 50V 50V 50V 50V 50V 50 |
| R523 R524 R525 R526 R527 R528 R530 RV501 RV503 ******* | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -057 -00 1 -216 -059 -00 1 -216 -049 -00 VAR 1 -228 -995 -00 1 -228 -994 -00 **************** *A -7068 -148 -A CAP 1 -161 -055 -00 1 -161 -055 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE ACAZE MK-2 BOARD, MK-2 BOARD, MK-2 BOARD, MK-2 BOARD CERAMIC CERAMIC CERAMIC | 47K 27K 18K 18K 2.2K 2.7K 1K RBON 22I RBON 10I ************************************ | 5% 5% 5% 5% 5% 5% 5% KK ***** | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W | 25V 25V | C601 C602 C603 C604 C605 C606 C607 C608 C609 C610 C611 C612 C613 C616 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-126-177-11 1-130-490-11 1-163-125-00 1-163-088-00 1-130-479-00 1-163-020-00 1-124-257-00 1-127-558-11 1-127-502-00 1-126-177-11 1-126-177-11 | NR-6 BOARD, ************ ACITOR ELECT ELECT ELECT ELECT MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP ELECT CERAMIC CHIP ELECT CERAMIC CHIP ELECT ELECT ELECT ELECT ELECT ELECT ELECT | 100MF 47MF 100MF 100MF 0.039MF 220PF 5PF 0.0047N 0.0082N 2.2MF 680PF 100MF 0.22MF | TE ** | 20% 20% 20% 20% 5% 10% 0.25PF 5% 10% 20% 20% 20% 20% 20% | 6.3V 10V 6.3V 6.3V 50V 50V 50V 50V 50V 50V 50V 6.3V 25V 6.3V |
| R523 R524 R525 R526 R527 R528 R530 RV501 RV503 ************************************ | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -057 -00 1 -216 -059 -00 1 -216 -049 -00 VAR 1 -228 -995 -00 1 -228 -994 -00 *************** *A -7068 -148 -A CAP 1 -161 -055 -00 1 -130 -471 -00 1 -161 -055 -00 1 -161 -055 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE CES, ADJ, CA ************************************ | 47K 27K 18K 18K 2.2K 2.7K 1K RBON 22I RBON 10I ************************************ | 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5 | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W | 25V 25V 50V 25V | C601 C602 C603 C604 C605 C606 C607 C608 C609 C610 C611 C612 C613 C616 C618 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-126-177-11 1-130-490-11 1-163-020-00 1-163-020-00 1-163-020-00 1-124-257-00 1-163-137-00 1-163-137-00 1-163-137-01 1-126-177-11 1-126-177-11 1-126-177-11 | NR-6 BOARD, *********** ACITOR ELECT ELECT ELECT ELECT HYLAR CERAMIC CHIP ELECT CERAMIC CHIP ELECT CERAMIC CHIP ELECT CERAMIC CHIP ELECT ELECT ELECT ELECT ELECT ELECT ELECT | COMPLET ******** 100MF 47MF 100MF 100MF 0.039MF 220PF 5PF 0.0047N 0.0082N 2.2MF 680PF 10MF 0.22MF 100MF 100MF | TE ** | 20% 20% 20% 5% 10% 0.25PF 10% 20% 10% 20% 20% 20% 20% 20% 20% | 6.3V 10V 6.3V 50V 50V 50V 50V 50V 50V 50V 6.3V 6.3V 6.3V 6.3V |
| R523 R524 R525 R526 R527 R528 R530 RV501 RV503 ************************************ | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -057 -00 1 -216 -059 -00 1 -216 -049 -00 VAR 1 -228 -995 -00 1 -228 -994 -00 *************** *A -7068 -148 -A CAP 1 -161 -055 -00 1 -161 -055 -00 1 -161 -055 -00 1 -161 -055 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE ACLITOR CERAMIC CERAMIC CERAMIC CERAMIC CERAMIC CERAMIC CERAMIC CERAMIC | 47K 27K 18K 18K 2.2K 2.7K 1K RBON 22I RBON 10I ************************************ | 5% 5% 5% 5% 5% 5% KK ***** | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W | 25V 25V 50V 25V 25V | C601 C602 C603 C604 C605 C606 C607 C608 C609 C610 C611 C612 C613 C616 C618 C652 C653 C654 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-130-490-11 1-163-125-00 1-163-088-00 1-130-479-00 1-163-020-00 1-124-257-00 1-163-137-00 1-127-558-11 1-127-502-00 1-126-177-11 1-126-177-11 1-126-177-11 1-126-177-11 1-126-177-11 1-126-177-11 | NR-6 BOARD, ************ ACITOR ELECT ELECT ELECT ELECT MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP ELECT CERAMIC CHIP ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT | COMPLET********* 100MF 47MF 100MF 0.039MF 220PF 5PF 0.0047N 0.0082N 2.2MF 680PF 10MF 0.22MF 100MF 100MF 100MF 100MF | TE ** MF | 20% 20% 20% 20% 5% 10% 0.25PF 5% 10% 20% 20% 20% 20% 20% 20% 20% 20% 20% 2 | 6.3V 10V 6.3V 6.3V 50V 50V 50V 50V 50V 6.3V 6.3V 6.3V 6.3V 6.3V 6.3V |
| R523 R524 R525 R526 R527 R528 R530 RV501 RV503 ************************************ | 1 -216 -089 -00 1 -216 -083 -00 1 -216 -079 -00 1 -216 -079 -00 1 -216 -057 -00 1 -216 -059 -00 1 -216 -049 -00 VAR 1 -228 -995 -00 1 -228 -994 -00 ************* *A -7068 -148 -A CAP 1 -161 -055 -00 1 -161 -055 -00 1 -161 -055 -00 1 -161 -055 -00 1 -161 -055 -00 1 -161 -055 -00 1 -161 -055 -00 1 -161 -055 -00 1 -130 -471 -00 | METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE CES, ADJ, CA ************************************ | 47K 27K 18K 18K 2.2K 2.7K 1K RBON 22I RBON 10I ************************************ | 5% 5% 5% 5% KK ***** FFFFFFFFFFFFFFFFFFFFFFFFFFFFFF | 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10W 1/10% 5% 10% 10% | 25V 25V 50V 25V | C601 C602 C603 C604 C605 C606 C607 C608 C609 C610 C611 C612 C613 C616 C618 | *A-7060-913-A CAP 1-126-177-11 1-124-446-11 1-126-177-11 1-130-490-11 1-163-125-00 1-163-088-00 1-130-479-00 1-163-020-00 1-124-257-00 1-163-137-00 1-127-558-11 1-127-502-00 1-126-177-11 1-126-177-11 1-126-177-11 1-126-177-11 1-126-177-11 | NR-6 BOARD, ************ ACITOR ELECT ELECT ELECT ELECT MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP MYLAR CERAMIC CHIP ELECT CERAMIC CHIP ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT ELECT | COMPLET ******** 100MF 47MF 100MF 0.039MF 220PF 5PF 0.0047N 0.0082N 2.2MF 680PF 100MF 0.02MF 100MF 100MF 100MF 0.039MF | TE ** MF | 20% 20% 20% 20% 20% 5% 10% 20% 10% 20% 20% 20% 20% 20% 20% 20% | 6.3V 10V 6.3V 6.3V 50V 50V 50V 50V 50V 6.3V 6.3V 6.3V 6.3V 6.3V |

NR-6 LD-1 MS-4 LS-9 TE-6 TE-5 DL-15

| No. Part N | lo. Des | cription | | | Remark | 1 No. | Part No. | Description | Remark |
|---|--|--|--------------------------------------|-------------------------------|----------------------------------|----------------|--------------------------------|---|-------------|
| C659 1-163- C660 1-124- C661 1-163- | -257 - 00 ELE -137 - 00 CER | AMIC CHIP | 2.2MF 680PF | | 50V 50V 50V 50V 6.3V | | *1-506-485-11 | MS -4 BOARD, COMPLETE *********************************** | |
| C663 1-127- | 502-00 ELE | | 0.22MF | 20% | 25V | C902 | | PACITOR CERAMIC CHIP 0.1MF | 25 V |
| | CONNECT | | | | | ***** | ******* | ******* | ***** |
| CN601 *1-565- | 002-11 PIN | , CONNECTO | OR 15P | | | | | LS -9 BOARD | |
| IC601 8-752- | | CX20099 | | | | | *1-506-485-11 | PIN, CONNECTOR (HOOK TYPE) | |
| | RES IS TO | <u> </u> | | | | ***** | ******* | ********* | ***** |
| R601 1-216- | | AL GLAZE | 10K 5 | % 1/10W % 1/10W | | | *1-621-998-11 | TE-6 BOARD | |
| R603 1-216- | 009-00 MET | AL GLAZE AL GLAZE AL GLAZE | | % 1/10W % 1/10W % 1/10W | | | *3-716-845-01 | HOLDER (LEFT), SENSOR | |
| R605 1-216- | 057-00 MET | AL GLAZE | 2.2K 5 | % 1/10W | • | | TRA | NS IS TOR | |
| R606 1-216- | 045-00 MET | AL GLAZE AL GLAZE | 680 5 | % 1/10W % 1/10W | | Q001 | 8-729-904-10 | PT360FS | |
| R608 1-216- | 063-00 MET | AL GLAZE | 3.9K 5 | % 1/10W | | | SWI | тсн | |
| R610 1-216- R611 1-216- | 059-00 META 061-00 META | AL GLAZE AL GLAZE AL GLAZE AL GLAZE | 3.3K 5 2.7K 5 3.3K 5 4.7K 5 | % 1/10W % 1/10W | | \$001 \$002 | 1-570-112-11 | SWITCH, LEAF (CASSETTE DOWN L) SWITCH, LEAF (LS TOP) | ***** |
| R614 1-216- | 065-00 META | AL GLAZE AL GLAZE | 4.7K 5 100 5 | % 1/10W | | | *1-621-997-11 | TE-5 BOARD | |
| R652 1-216- R653 1-216- | 073-00 MET/ 009-00 MET/ | AL GLAZE AL GLAZE AL GLAZE AL GLAZE | 10K 5 10K 5 22 5 2.7K 5 | % 1/10W % 1/10W | | | | HOLDER (RIGHT), SENSOR | |
| | | L GLAZE | 2.7K 5 | | | | | OT LAMP | |
| | | AL GLAZE AL GLAZE | 680 5 12K 5 | | | | 1-518-621-21 1-518-621-21 | | |
| | | AL GLAZE AL GLAZE | 3.9K 5 3.3K 5 | | | | TRA | NSISTOR | |
| | | L GLAZE | 2.7K 5 | | | Q001 | 8-729-904-10 | PT360FS | |
| | 061-00 MET/ 065-00 MET/ | | 3.3K 5 | | | | | тсн | |
| ******* | ****** | ****** | ***** | ****** | ****** | \$001 | 1-570-112-11 | SWITCH, LEAF (CASSETTE DOWN R) | |
| *A-7070 | -024-A LD- | BOARD, | | | | | ************ *1-621-993-11 | DL-15 BOARD | ***** |
| <i>.</i> | DIODE | | | | | | | | |
| D901 8-719- | 928-54 DIOI | E GL-450S | ; | | | | DIO | <u>DE</u> | |
| | ******************* | | | | | | .8-719-109-50 .8-719-309-XX | DIODE RD2.0ESB1 DIODE D3SB10 | |

The components identified by mark \bigwedge or dotted line with mark \bigwedge are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque A sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifé.

When indicating parts by referplease include ence number, the board name.

The second secon

DL-15 DO-1 DT-63

| No. Part No. | Description | | Remark | No. | Part No. | Description | | | | Remark |
|---|---|--------------------------|---------------------------|-----------------------------------|--|---|------------------------------|--------------------------------|-----------------------|-------------|
| <u>IC</u> ICOO1 <u>↑</u> 8-759-803-5€ <u>TF</u> | _ | | | D114 <u>↑</u> D115 | .8-719-110-90 .8-719-109-97 8-719-110-42 | DIODE 1SS202 DIODE RD39ES DIODE RD6.8ES DIODE RD15ESE DIODE RD10ES | -84 5 -83 33 | | | |
| | TRANSISTOR DTC114ES | | | D117 D119 | | DIODE RD4.7ES DIODE ISS1191 | | | | |
| R001 1-249-417-11 | CARBON 1K 5% | 1/4W | | | <u>Fus</u> | <u>E</u> | | | | |
| ****** | ******* | ***** | ***** | F103 ⚠ | . 1-532-780-21 | FUSE, MICRO | S ECOND | ARY) | (2.5A) | |
| *1-621-992-11 | DO -1 ROAPD | | | | IC | LINK | | | | |
| | ************ ANSISTOR | | | PS102 <u>/1</u> \ | 1-532-679-00 | LINK, IC (0.2 LINK, IC (0.4 | A) | | 4. | |
| | | | | PS 104//\ | 1-532-605-00 | LINK, IC (0.6 | A) | | | |
| Q502 <u>M</u> . 8-729-804-67 | TRANSISTOR 2SC3851 TRANSISTOR 2SB1133-R | | | | | NS IS TOR | | | | |
| ******* | | ***** | ****** | Q106 🛝 | .8 <i>-</i> 729 <i>-</i> 177 <i>-</i> 32 | TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S | D773 | | | |
| *A-7070-324-A | DT-63 BOARD, COMPLETE | | | , | | ISTOR | 5775 | • | | |
| *1-621-994-11 | DT-63 BOARD | | | R103 | 1-249-421-11 | | 9 01/ | Εø | 1 (4)4 | |
| | PACITOR | | | R104 | 1-249-421-11 | CARBON | 2.2K 2.2K | 5% 5% | 1/4W 1/4W | |
| C102 1-124-771-00 C103 1-123-334-00 | ELECT 6800MF | 20% | 25V | R105 //. R107 R108 | 1-246-449-25 1-249-425-11 1-249-434-11 | CARBON CARBON CARBON | 100 4.7K 27K | 5% 5% 5% | 1/4W 1/4W 1/4W | |
| C104 1-123-332-00 C105 1-123-332-00 | ELECT 47MF | 20% 20% 20% | 25V 16V 16V 5.5V | R109 R111 R112 | 1-249-441-11 1-249-431-11 1-249-422-11 | CARBON CARBON | 100K 15K 2.7K | 5% 5% 5% | 1/4W 1/4W 1/4W | |
| C111 1-124-931-11 C112 1-124-931-11 C114 1-108-634-11 C115 1-123-334-00 | ELECT 47MF MYLAR 0.047MF | 20% 20% 10% 20% | 100V 100V 100V | R113 R117 <u>∧</u> . | 1-249-416-11 1-212-966-00 | CARBON FUS IBLE ******* | 820 22 ***** | 5% 5% **** | 1/4W 1/2W ***** | F ****** |
| | NECTOR | 20% | 25V | | | CELLANEOUS | , | | | |
| CN102 *1-560-893-00 CN104 *1-560-893-00 CN105 *1-560-891-00 CN106 *1-560-896-00 CN107 *1-560-893-00 | PIN, CONNECTOR 5P PIN, CONNECTOR 3P PIN, CONNECTOR 8P | | | ↑. | 1-464-785-71 1-466-156-11 1-526-882-00 | ENCODER, ROTAL SWITCH BLOCK, MODULATOR, RF OUTLET, AC TERMINAL, SHAI | CONTRO (RFU10 | 011) | | |
| CN108 *1-560-891-00 CN203 *1-560-894-00 | PIN, CONNECTOR 3P PIN, CONNECTOR 6P | | | C901 | 1-161-057-00 | CORD, POWER CAP, CERAMIC (| 0.033MF | - X | | |
| DIC | DE | | 1 | M903 | 8-835-138-01 | MOTOR, DC U-1: MOTOR, DC (DN | R-5301E | 3) (C | ONTROL) | |
| D103 A.8-719-911-19 D104 A.8-719-911-19 D106 A.8-719-110-16 D107 A.8-719-908-03 D108 8-719-200-02 | DIODE 1SS119TD DIODE RD10ES-B1 DIODE GPO8D DIODE 10E-1 | | | M905 M906 PM901∕∆. S 901 | A-7090-661-A 8-835-247-01 1-454-377-31 1-571-680-21 | MOTOR ASSY, L MOTOR BLOCK AS MOTOR, DC BHF SOLENOID, PLUI SWITCH, PUSH SWITCH, PUSH | SSY, LS -2804D NGER (E | (LII (CAPS BRAKE (REC | NEAR SKA STAN) | TE) |
| D109 8-719-110-42 D110 8-719-109-93 | DIODE RD15ES -B3 DIODE RD6.2ES -B2 | | | | | TRANSFORMER, F | | <i>L</i>) | | |

The components identified by mark or dotted line with mark are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque 🛕 sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

ACCESSORIES AND PACKING MATERIALS

| Part No. | Description | Remark |
|---|---|--------|
| A-6767-422-A 1-417-139-11 1-513-379-00 1-551-086-31 1-558-076-41 | COMMANDER ASSY (RMT-424) MATCHING TRANSFORMER, ANTENNA CONVERTER (EAC-25) (CND) CORD, CONNECTION CORD, CONNECTION | (US) |
| 1-558-543-11 1-559-457-11 *3-677-503-00 *3-713-408-01 *3-713-465-01 | | |
| *3-722-142-01 *3-722-143-01 *3-722-144-11 3-786-709-21 3-786-709-31 8-883-112-29 | MANUAL, INSTRUCTION MANUAL, INSTRUCTION (CND) | |
| 0-003-112-29 | VO-UCLUSE | |

HARDWARE LIST

7-671-112-01 STEEL, BALL

| Part No. | Description | Remark |
|---|--|--------|
| 7 -621-255-50 7 -627 -553-48 7 -628 -254-00 | SCREW +P 2X4 SCREW +P 2X8 SCREW, PRECISION +P 2X4 SCREW +PS 2.6X5 SCREW +B 3X10 | |
| 7-685-133-19 7-685-234-19 7-685-646-79 | SCREW +P 2X3 NON-SLIT TYPE2 SCREW +P 2.6X6 TYPE1 SCREW +KTP 2.6X8 TYPE2NON-SLIT SCREW +BVTP 3X8 TYPE2 IT-3 SCREW +BVTP 3X12 TYPE2 IT-3 | |
| | SCREW +PTT 2X3 (S) SCREW +BVTT 2X6 (S) | |
| <u>ST0</u> | PRING | |
| 7-624-102-04 7-624-105-04 7-624-106-04 | STOP RING 1.2 (E TYPE) STOP RING 1.5, TYPE -E STOP RING 2.3, TYPE -E STOP RING 3.0, TYPE -E STOP RING 5, TYPE-CS | |
| STE | EL BALL | |

SECTION 7 MECHANICAL ADJUSTMENT

7-1. PREPARATION ITEMS FOR MECHANISM SECTION CHECKING, ADJUSTMENT AND REPLACEMENT

Note: Regarding removal of cabinet and respective boards, see Section 2. DISASSEMBLY.

7-1-1. LS Cassette Compartment Assembly and Operation without Tape Inserted

Note: The set will not operate if there is a strong light source near it.

1. Threading Method (See Fig. 7-1.)

- 1) Remove the front panel, upper case, and bottom plate according to Section 2. DISASSEMBLY, 2-1. and 2-2.
- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY, 2-16. (Do not remove the connectors.)
- 3) Place the tape over the pin emerging from the push switch 1.
- 4) Place the cap ②, etc., over the LED assembly.
- 5) Push the lock holder 3 in the direction of arrow A.
- 6) Short the leaf switch 4 using a clip 6, etc.
- Connect the power supply and press the power button to turn on the power.

- 2. Putting into playback state (See Fig. 7-1.)
- 1) Perform "1. Threading Method".
- 2) Hook the rubber band 6 between S reel and T reel.
- 3) Press the playback button, and when the T reel side starts to rotate, push the tension regulator arm assembly 10 in the direction of the arrow 13. (At this time, the tension regulator band is released and S reel side rotates.)
- 4) Press the STOP button to stop.

3. Putting into recording state (See Fig. 7-1.)

- 2) Hook the rubber band 6 between S reel and T reel.
- 3) Press the recording button, and when the T reel starts to rotate, push the tension regulator arm assembly 1 in the direction of the arrow 1. (At this time, the tension regulator band is released and S reel rotates.)
- 4) Press the STOP button to stop.

4. Eject

1) Press the EJECT button.

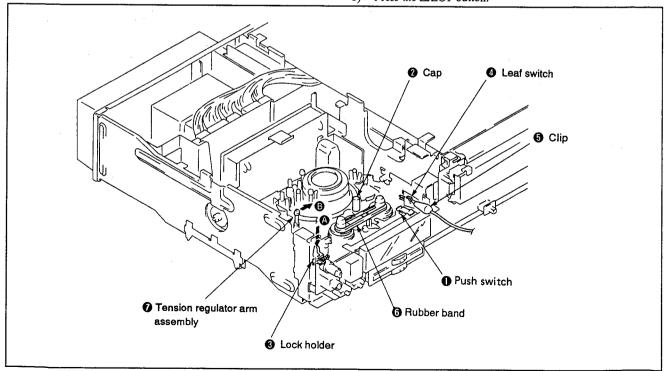


Fig. 7-1.

7-1-2. Handling of Mode Selector

1. Name of individual parts (Exterior)

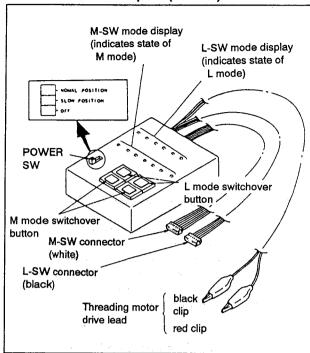


Fig. 7-2.

2. Connection (See Fig. 7-3.)

- 1) Remove the front panel, upper case and bottom plate according to Section 2. DISASSEMBLY 2-1., 2-2.
- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16. (Do not disconnect the connectors.)
- Disconnect the connectors on the MS-4 board and LS-9 board (one each).
- Insert the M-SW connector (6P connector, 6 harness, white) 1 into the MS-4 board on the set.
- Insert the L-SW connector (6P connector, 4 harness, black) 2 into the LS-9 board on the set.
- 6) Connect the red clip of the threading motor drive lead 3 to the red lead wire side of the threading motor and the black clip to the brown lead wire side.

3. Caution

- When operating L-SW, be sure to set the M-SW mode to LOADING/UNLOADING.
- When operating M-SW, be sure to set the L-SW mode to LOADING TOP or LOADING END.

4. Handling

BLANK lights up regardless of L MODE or M MODE when it is in neither mode during select.

1) L-MODE

- When the right L-MODE switch button is pressed continuously, the display lights up from LOADING TOP
 → LOADING END, in order in right direction.
- To go from LOADING END

 LOADING TOP, press
 the left switch button continuously until the desired
 MODE is reached.
- In slow position, the L mode operates more slowly than for normal position.

2) M-MODE

- Set L-SW to LOADING TOP before performing EJECT.
- Set L-SW to LOADING END to perform FF/REW → RVS or RVS → FF/REW.
- When the right M-MODE switch button is pressed continuously, the display lights up from EJECT → RVS, in order in right direction.
- To go from RVS → EJECT, press the left switch button continuously until the desired MODE is reached.

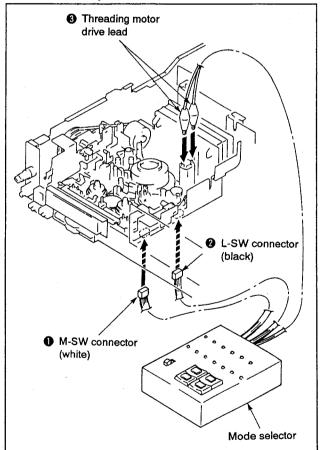


Fig. 7-3.

7-2. PERIODIC CHECK AND MAINTENANCE

Please perform the following periodic checks and maintenance in order to obtain optimum set function and performance, and to keep the mechanism and tape in good condition. Also, perform the maintenance below after repair, regardless of the length of time the set has been used by the user.

7-2-1. Cleaning of Rotary Drum Assembly

 Press a chamois cloth (Ref. No. J-2) soaked in cleaning fluid (Ref. No. J-1) lightly against the rotary drum assembly, and slowly turn the rotary upper drum assembly counterclockwise by hand to clean.

Note: Do not use the power supply to rotate the motor, and do not rotate the motor clockwise by hand.

Also, there is a danger of damaging the head tip if the chamois cloth is moved vertically relative to the head tip (up/down direction of drum), so please follow the instruction above for cleaning.

7-2-2. Cleaning of Tape Path (See Fig. 7-4.)

 Place the LS cassette compartment assembly in EJECT state, and clean the tape path (No. 1 to No. 11 guides, capstan shaft, pinch roller, IP roller guide) with a chamois cloth soaked in cleaning fluid.

7-2-3. Cleaning of Drive System

1) Clean the drive system (timing belt, surface of reel tables) with a cloth soaked in cleaning fluid.

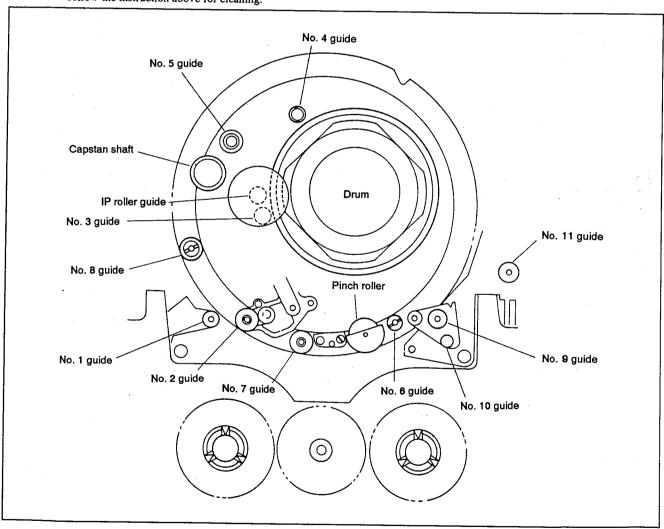


Fig. 7-4.

7-2-4. Periodic Check

Perform following according to number of hours of use.

OCleaning ⊚Lublication ★Replacement ☆Check

| Location | | Hours of Use (H) | | | | | | | | Notes | | |
|----------------------|---|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| | | 500 | 1,000 | 1,500 | 2,000 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | 5,000 | Notes |
| Tape path | Cleaning of tape path surface | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Be careful of oil |
| | Cleaning and degaussing of rotary drum assembly | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Be careful of oil |
| | Threading motor belt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * | 0 | 0 | 3-686-546-01 Replace here, or replace every two years. |
| _ | Brake planger | _ | | | 0 | | _ | | 0 | _ | | 1-454-377-31 |
| Drive System | Capstan shaft bearing | - | 0 | _ | 0 | _ | 0 | _ | 0 | _ | 0 | Be careful not to get oil on the tape path surface. |
| | Threading motor | _ | ☆ | _ | ☆ | _ | ☆ | _ | ☆ | _ | ☆ | A-7040-065-A |
| Ì | Control motor | _ | ☆ | | ☆ | _ | ☆ | - | ☆ | | ☆ | 8-835-138-01 |
| | LS motor belt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ★ | 0 | 0 | 3-713-670-01 |
| | LS motor | - | ☆ | | ☆ | _ | ☆ | _ | ☆ | _ | ☆ | A-7090-661-A |
| | Reel motor | - | ☆ | - | ☆ | - | ☆ | _ | ☆ | _ | ☆ | 8-835-282-03 |
| | Abnormal noise | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | |
| Performance Check | Back tension measurement | _ | ☆ | _ | ☆ | | ☆ | | ☆ | _ | ☆ | |
| forman | Brake system | _ | ☆ | - | ☆ | _ | ☆ | | ☆ | | ☆ | |
| Perl | FWD, RVS torque measurement | _ | ☆ | _ | ☆ | _ | ☆ | | ☆ | _ | ☆ | |

Note: When performing an overhaul, refer to the items above when replacing parts.

Note: Regarding oil

 Be sure to use designated oil. (There is a danger of trouble occurring if a different viscosity is used.)
 Oil: Parts No. 7-661-018-01

(Mitsubishi Diamond Oil hydrofluid EP56)

- Be sure to use clean oil when lubricating the shaft bearing, because there is a danger of wear and burning if dirty oil is used.
- One drop of oil means the amount which sticks to a 2 mm diameter rod, as shown in Fig. (See Fig. 7-5.)

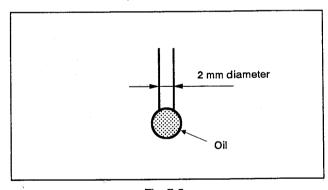


Fig. 7-5.

7-2-5. Service Jig Table

| Ref. No. | Name | Part No.Jig | Use | Notes | | |
|----------------------|--|--|---------|-----------------------------|--|--|
| J-1 | Cleaning fluid | Y-2031-001-1 | | | | |
| J-2 | Chamois cloth | 2-034-697-00 | | | | |
| J-3 | Head degausser | Commercially sold | | | | |
| J-4 | Small adjustment mirror, Spare mirror | J-6080-029-A J-6080-030-1 | SL-5052 | Tape path | | |
| J-5 | Alignment tape(WR5-7NE) | 8-967-995-13 | | Tape path | | |
| J-6 | Dial tension gauge | J-6080-827-A | | Various torque measurements | | |
| J-7 | Tension measurement reel | J-6080-831-A | | with ϕ 30 tape | | |
| J-8 | Tension measurement reel | J-6080-832-A | | with ϕ 16 string | | |
| J-9 | No.10 gear phase jig | J-6080-823-A | GD-2047 | | | |
| J-10 | No.6 guide lock screwdriver | J-6080-826-A | | | | |
| J-11 Rotary drum jig | | (packed with the rotary upper drum for repair) | | | | |
| J-12 | FWD, RVS winding torque cassette | J-6080-824-A | GD-2086 | | | |
| J-13 | Mode selector | J-6080-825-A | | for all models | | |
| J-14 | Track shift & monitor jig | J-6080-843-A | | Tape path | | |
| J-15 | RF/SWP connector | J-6080-883-A | | Tape path | | |
| J-16 | CTL connector | J-6080-884-A | | Tape path | | |

Other equipment:

- Oscilloscope
- Analog tester(20 k Ω)

| J-1 | J-2 | J-3 | J-4 |
|------|------|---|------|
| J-5 | J-6 | J-7 | 1-8 |
| J-9 | J-10 | J-11 (packed with the rotary upper drum for repair) | J-12 |
| J-13 | J-14 | J-15 | J-16 |

7-3. MECHANICAL CHECK, ADJUSTMENT AND REPLACEMENT

Note: • Use the mode selector (Ref. No. J-13) for this mechanical check, adjustment and replacement.

• The mode inside the ____ is the mode set by pressing the mode selector button.

7-3-1. Fly wheel

1. Removal (See Fig. 7-6.)

1) While holding the claws 20 of the IP roller guide 10, remove the fly wheel 3.

2. Mounting (See Fig. 7-6.)

1) With the large hole of the fly wheel 3 down, push onto the IP roller guide 1 until it clicks into place.

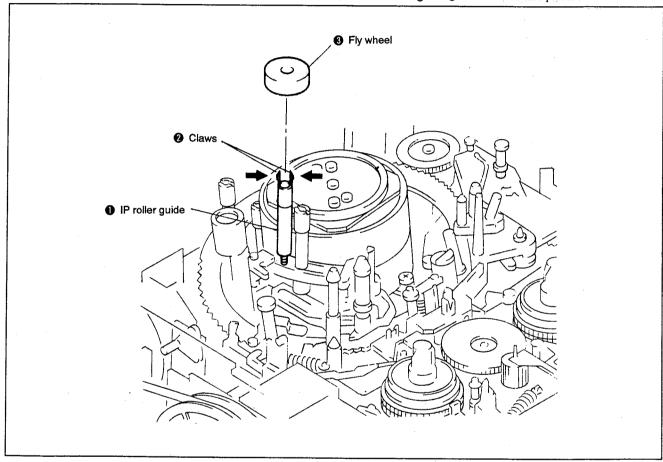


Fig. 7-6.

7-3-2. S Reel Table Assembly

- 1. Removal (See Fig. 7-7.)
- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.
- 2) Set to FF/REW mode.
- 3) Remove screw 1 and remove reel table stopper 2.
- Remove the S reel table assembly (3).
 Note: Be sure to hold the upper reel claw section when removing. (See Fig. 7-7. (Note))
- 2. Mounting (See Fig. 7-7.)
- 1) Put a half drop of oil on the upper spherical part of shaft 4.
- 2) Move the S main brake assembly (5) in the direction of arrow.
- 3) Mount the S reel table assembly **3**, being careful not to hit the tension regulator band assembly **5**.
- 4) Mount the reel table stopper 2 and tighten with screw 1.
- 5) Set to LOADING/UNLOADING mode.
- Mount the LS cassette compartment assembly in opposite procedure of Section 2. DISASSEMBLY 2-16.

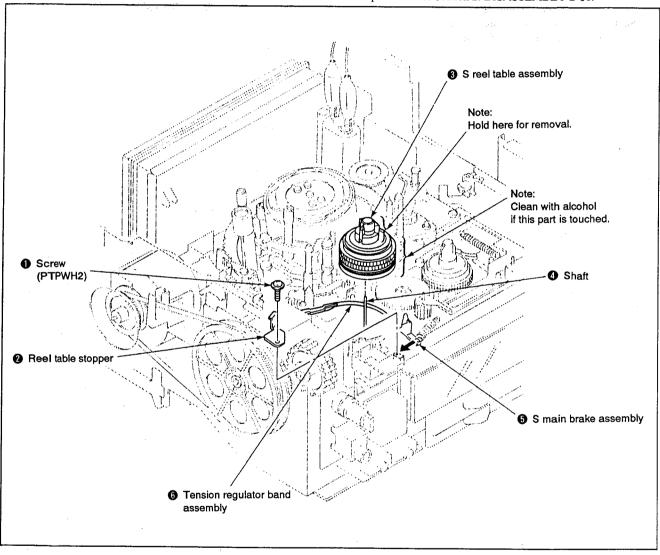


Fig. 7-7.

7-3-3. T Reel Table Assembly

- 1. Removal (See Fig. 7-8.)
- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.
- 2) Set to UNLOADING WAIT mode.
- 3) Hook the spring ② on the T.S brake assembly ① to the claw of lock slider assembly.
- 4) Remove the stopper washer 3 and remove the T.S brake assembly 1.
- 5) Set to EJECT mode.
- 6) Move drive gear B assembly 4 in the direction of the arrow.
- 7) Remove T reel table assembly 6.

Note: Be sure to hold the upper reel claw section when removing. (See Fig. 7-8. (Note))

- 2. Mounting (See Fig. 7-8.)
- 1) Put a half drop of oil on the upper spherical part of shaft 1.
- 2) Move the drive gear B assembly 4 in the direction of the arrow. (Confirm EJECT mode.)
- 3) Mount the T reel table assembly 6.
- 4) Mount the T.S brake assembly 1 and fix the stopper washer 3.
- 5) Hook the spring 2 to the T.S brake assembly 1 claw.
- 6) Set to LOADING TOP, LOADING/UNLOADING mode.
- Mount the LS cassette compartment assembly in opposite procedure of Section 2. DISASSEMBLY 2-16.

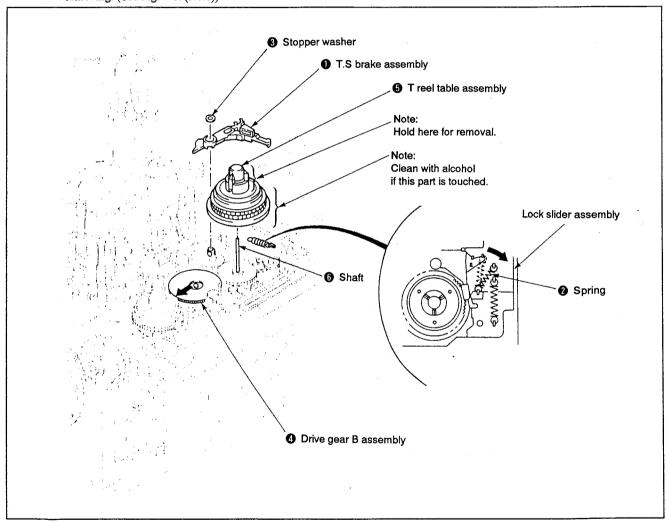


Fig. 7-8.

7-3-4. Pinch Press Arm Assembly

- 1. Removal (See Fig. 7-9.)
- 1) Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.
- 2) Hook the spring 1 to the pinch press arm assembly 2.
- 3) Remove the stopper washer 3 and remove the pinch press arm assembly 2.
- 2. Mounting (See Fig. 7-9.)
- 1) Put a half drop of oil on the shaft 4.
- 2) Mount the pinch press arm assembly 2 and fix the stopper washer 3.
- 3) Hook the spring **1** to the tension regulator spring hook assembly **5**.
- 4) Mount the LS cassette compartment assembly in opposite procedure of Section 2. DISASSEMBLY 2-16.

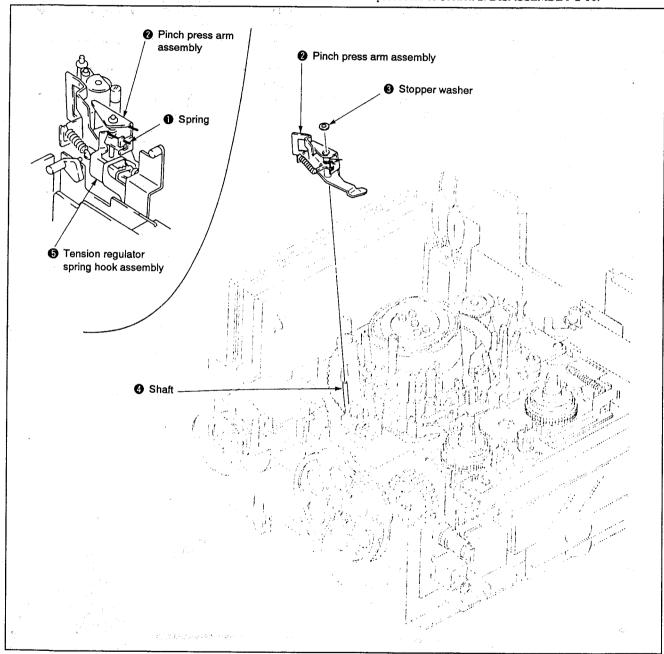


Fig. 7-9.

7-3-5. Tension Regulator Arm Assembly

- 1. Removal (See Fig. 7-10.)
- Remove the mechanism block according to Section 2. DISASSEMBLY 2-15.
- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.
- 3) Remove the LS motor belt 1
- 4) Remove the four screws 2 and move the front base 3 in the direction of arrow.
- 5) Change the spring position as described in 7-3-4. 1. Removal, 2).
- 6) Remove the tension spring **4**. (Note its hooking position.)
- 7) Remove the screw **5** and remove the tension regulator spring hook assembly **6**.
- 8) Set to FF/REW mode.
- Remove the tension regulator band assembly claw .
- 10) Remove the tension regulator arm assembly (3).

- 2. Mounting (See Fig. 7-10.)
- 1) Put a half drop of oil on the shaft **9**.
- 2) Mount the tension regulator arm assembly ③, inserting the tension regulator load arm assembly pin ⑩ in the tension regulator arm assembly ③ cam groove (on the back).
- 3) Mount the tension regulator band assembly claw ①. (Do not touch the band or change its shape.)
- 4) Set to LOADING/UNLOADING mode.
- 5) Mount the tension regulator spring hook assembly (3) and tighten with screw (3).
- Replace the tension spring 4 in its original position and lock the screw.
- 7) Hook the spring according to 7-3-4. 2. Mounting, 3). (See Fig. 7-9.)
- 8) Mount the front base 3 and tighten with four screws 2.
- 9) Mount the LS motor belt 1.
- Mount the LS cassette compartment assembly in opposite procedure of Section 2. DISASSEMBLY 2-16.
- 11) Mount the mechanism block in opposite procedure of Section 2. DISASSEMBLY 2-15.

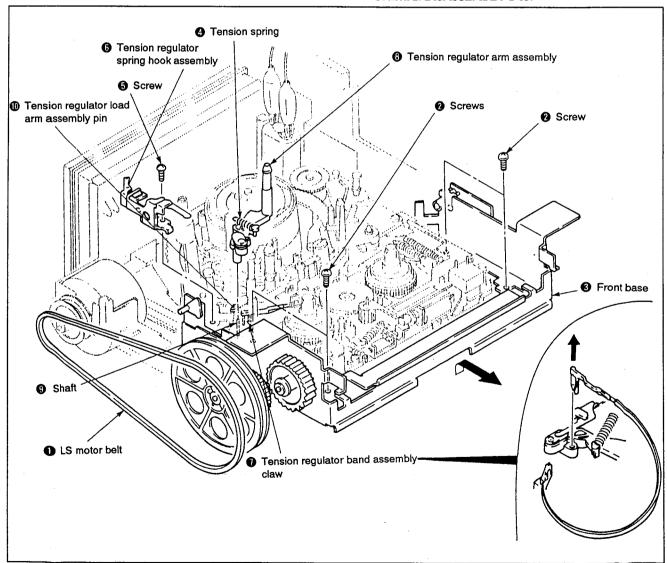


Fig. 7-10.

7-3-6. Tension Regulator Band Assembly

- 1. Removal (See Fig. 7-11.)
- 1) Remove the S reel table assembly according to 7-3-2.
 1. Removal. (See Fig. 7-7.)
- 2) Remove the band arm claw 1.
- 3) Remove the claw 2 and remove the tension regulator band assembly 3.
- 2. Mounting (See Fig. 7-11.)
- 1) Mount the tension regulator band assembly **3**. (Do not touch the band or change its shape.)
- 2) Fit the band arm claw 1.
- 3) Mount the S reel table assembly according to 7-3-2. 2. Mounting. (See Fig. 7-7.)
- 4) Perform 7-3-22. FWD Back Tension Adjustment.

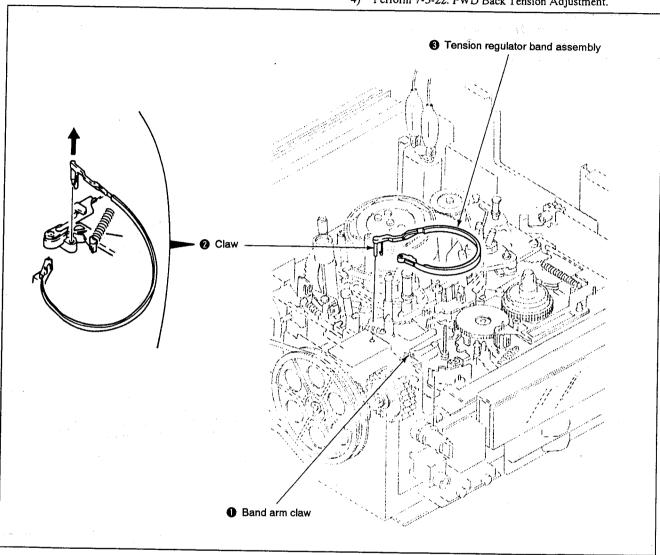


Fig. 7-11.

7-3-7. Threading Motor Assembly

- 1. Removal (See Fig. 7-12.)
- 1) Turn on the power supply and press the power button.
- 2) Press the EJECT button. (Be sure to turn off the power after setting to the EJECT mode. If the power does not come on, eject the tape manually according to Section 2. DISASSEMBLY 2-17.)
- 3) Open the SP-7 board 1 according to Section 2. DISASSEMBLY 2-6.
- 4) Remove the connector 2 from the SP-7 board 1.
- 5) Remove the threading motor belt 3.
- 6) Remove the two screws 4.
- 7) Remove the threading motor assembly **5**.

- 2. Mounting (See Fig. 7-12.)
- 1) Mount the threading motor assembly **5** and tighten with the two screws **4**.
- 2) Mount the threading motor belt 3.
- 3) Connect the connector 2 to the SP-7 board 1.
- Mount the SP-7 board in opposite procedure of Section 2. DISASSEMBLY 2-6.

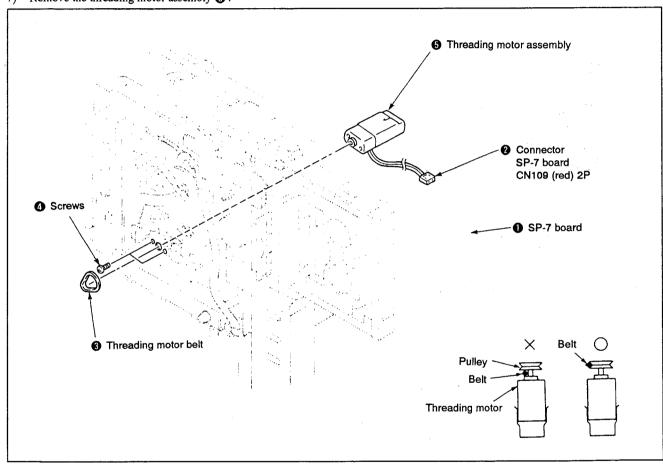


Fig. 7-12.

7-3-8. Threading Ring Assembly

- 1. Removal (See Fig. 7-13.)
- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.
- Remove the mechanism block according to Section 2. DISASSEMBLY 2-15.
- 3) Operate the mode selector, and move the guide base assembly 1 until just before it locks, and the No. 2 guide assembly 2 until just before it locks where the ring stopper 3 screw is visible.

(Do not move threading ring assembly 10.)

- 4) Remove the stopper washer 4 and remove No. 10 gear 5.
- 5) Remove the screw **6**, and remove the roller stop plate **1** and ring roller **8**.
- 6) Remove the two screws (1), and remove the ring stopper (3) and ring roller (10).
- 7) Remove the threading ring assembly **1** in the direction of arrow.

Note: When removing the threading ring assembly **1**, be sure not to come into contact with the drum.

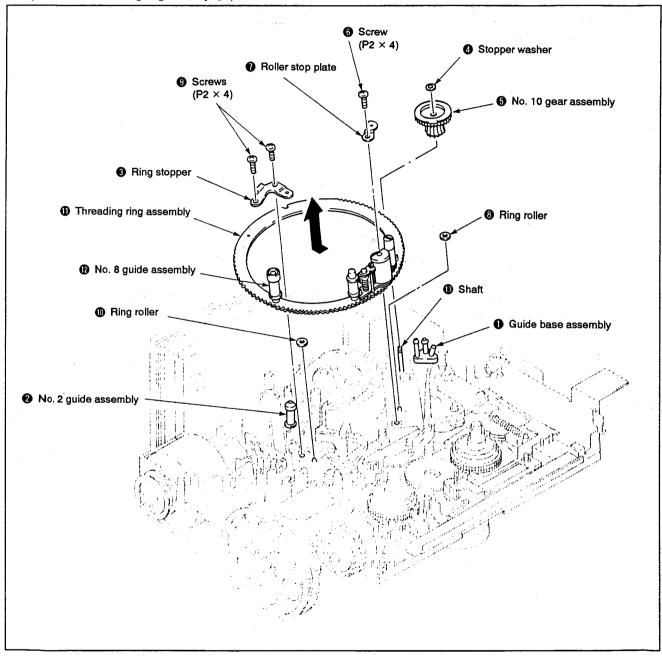


Fig. 7-13.

2. Mounting (See Fig. 7-14.)

- 1) Mount the threading ring assembly ① so that it becomes in the unthreaded state (pinch roller arm assembly is on the front panel side.) (Confirm that it is in the state in Removal, 3).)
- 2) Mount the ring roller **①** and ring stopper **③** and tighten with the two screws **⑤**. (No. 8 guide assembly **②** should be closer to the front panel than the ring stopper **⑤**.)
- 3) Mount the ring roller 3 and roller stop plate 7 and tighten with screw 3. (Confirm that the threading ring assembly matches the three ring rollers.)
- 4) Put a half drop of oil on the shaft 13.
- Check that the protrusions on the drive changer assembly are in the indentations of the L-SW assembly and insert the No. 10 gear phase jig (Ref. No. J-9).

- 6) Mount No. 10 gear assembly 3 and fix stopper washer 4 while pushing the No. 8 guide assembly 12 against the ring stopper 3.
- 7) Pull out the No. 10 gear phase jig.
- 8) Set to LOADING TOP mode.
- 9) Mount the LS cassette compartment assembly in opposite procedure of Section 2. DISASSEMBLY 2-16.
- 10) Mount the mechanism block in opposite procedure of Section 2. DISASSEMBLY 2-15.

Note: Be sure to perform 7-4. TAPE PATH ADJUSTMENT after mounting.

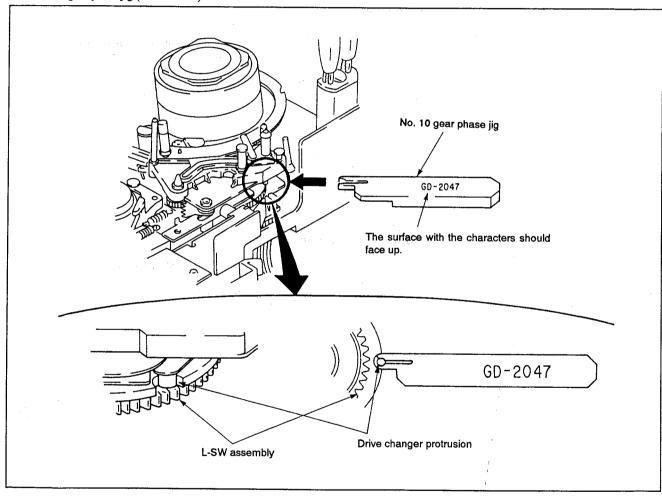


Fig. 7-14.

7-3-9. Pinch Roller Arm Assembly

- 1. Removal (See Figs. 7-15. through 7-19.)
- Remove the threading ring assembly according to 7-3-8.
 Removal. (See Fig. 7-13.)
- 2) Remove the stopper washer ①. (See Fig. 7-15.)
- 3) Change the position of the torsion spring 3 on No. 7 guide assembly 2. (See Fig. 7-16.)
- 4) Turn the pinch roller arm assembly 4 in the direction of arrow. (See Fig. 7-17.)
- 5) Remove the pinch roller arm assembly 4 in the direction of arrow. (See Fig. 7-18.)
- 6) Remove the torsion spring 3. (See Fig. 7-19.)

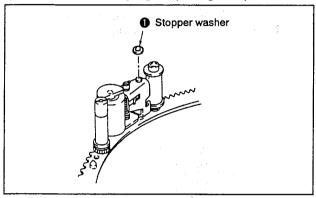


Fig. 7-15.

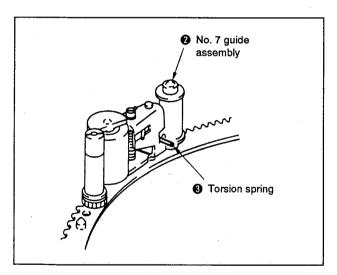
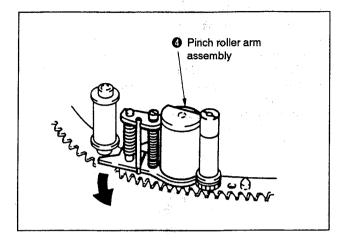


Fig. 7-16.



Fig, 7-17.

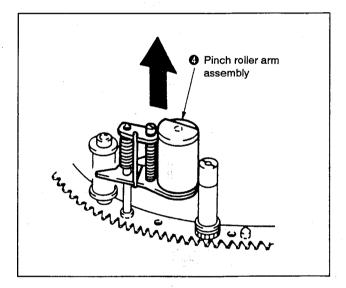


Fig. 7-18.

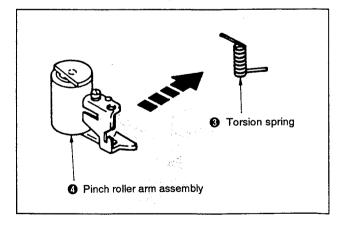


Fig. 7-19.

- 2. Mounting (See Figs. 7-20. through 7-26.)
- 1) Hook the torsion spring 3. (See Fig. 7-20.)
- 2) Insert the clip **5** or another thin rod inside the pinch roller arm assembly hole **6**. (See Figs. 7-21. and 7-22.)
- 3) Put the end of the clip **5** to the threading ring assembly shaft **7** and mount the pinch roller arm assembly **4**. (See Figs. 7-23. and 7-24.)
- Hook the torsion spring on No. 7 guide assembly ②. (See Fig. 7-25.)
- 5) Fix the stopper washer ①. (See Fig. 7-26.)
- 6) Mount the threading ring assembly according to 7-3-8.2. Mounting. (See Fig. 7-13.)

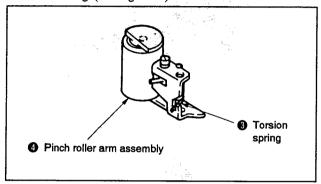


Fig. 7-20.

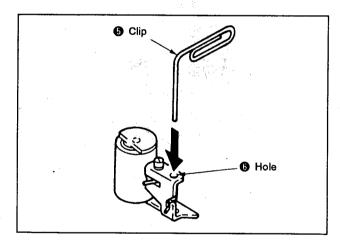


Fig. 7-21.

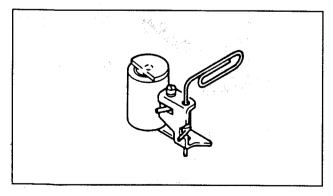


Fig. 7-22.

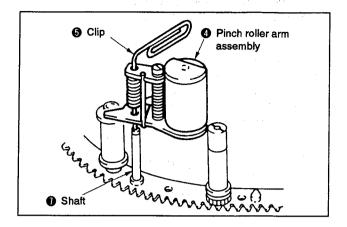


Fig. 7-23.

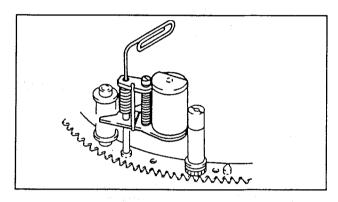


Fig. 7-24.

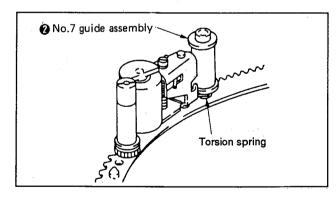


Fig. 7-25.

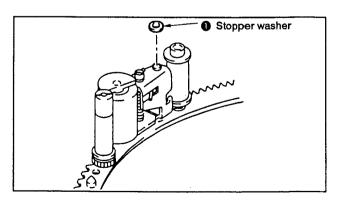


Fig. 7-26.

7-3-10. Slant Guide Chassis Assembly

- 1. Removal (See Fig. 7-27.)
- 1) Remove the threading ring assembly according to 7-3-8.

 1. Removal. (See Fig. 7-13.)
- 2) Remove screw 1 and E ring 2.
- 3) Remove the slant guide chassis assembly 3.

- 2. Mounting (See Figs. 7-27. through 7-29.)
- Operate the mode selector, and line up the right edge of the L slider assembly and the right edge of the lock slider assembly. (See Fig. 7-28.)
- 2) Set the slant guide chassis assembly § guide base assembly in unthreaded state (guide base assembly is on front panel side) and mount. (See Fig. 7-29.)

Note: At this time, check the engagement position of the slant guide driving gear and L slider section assembly gear. (See Fig. 7-33.)

- 3) Insert the E ring 2 and tighten with screw 1.
- 4) Put in the state in 7-3-8. 1. Removal, 3).
- 5) Mount the threading ring assembly according to 7-3-8.
 2. Mounting. (See Figs. 7-13. and 7-14.)

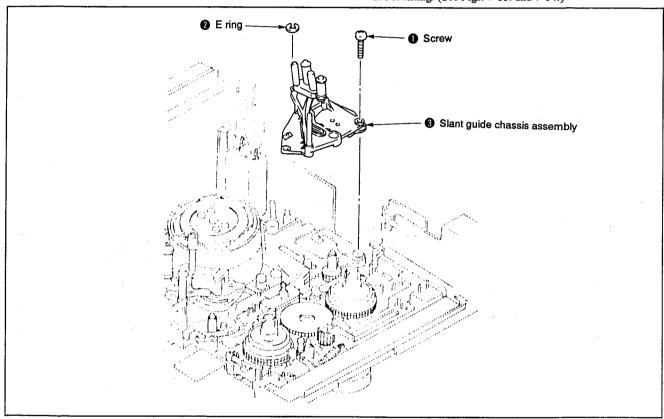


Fig. 7-27.

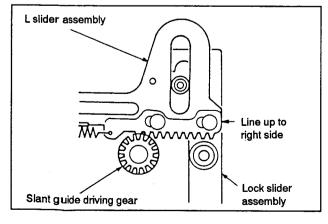


Fig. 7-28.

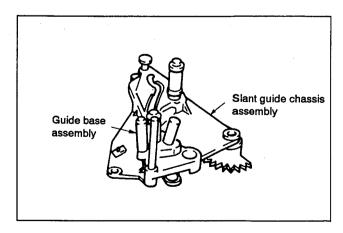


Fig. 7-29.

7-3-11. Entrance Guide Assembly (No. 2 Guide Assembly)

- 1. Removal (See Fig. 7-30.)
- 1) Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.
- 2) Turn the rotary upper drum counterclockwise, so that the head section dose not touch the entrance guide assembly 1.
- 3) Remove the fly wheel according to 7-3-1. 1. Removal. (See Fig. 7-6.)
- 4) Remove No. 3 guide nut ②, and remove guide flange ③, guide ④ and compression spring ⑤.
- 5) Remove the two screws 6.
- 6) Remove the entrance guide assembly 1.

- 2. Mounting (See Fig. 7-30.)
- 1) Engage the lower side of the entrance guide assembly and L slider assembly with their flat portions (a) and (b) as shown.
- 2) Tighten the two screws 6.
- 3) Mount the compression spring 5, guide 4 and guide flange 3 in that order and then temporarily tighten the guide nu 2.
- 4) Mount the fly wheel according to 7-3-1. 2. Mounting. (See Fig. 7-6.)
- 5) Mount the LS cassette compartment assembly in opposite procedure of Section 2. DISASSEMBLY 2-16.

Note: Be sure to perform 7-4. TAPE PATH ADJUSTMENT after mounting.

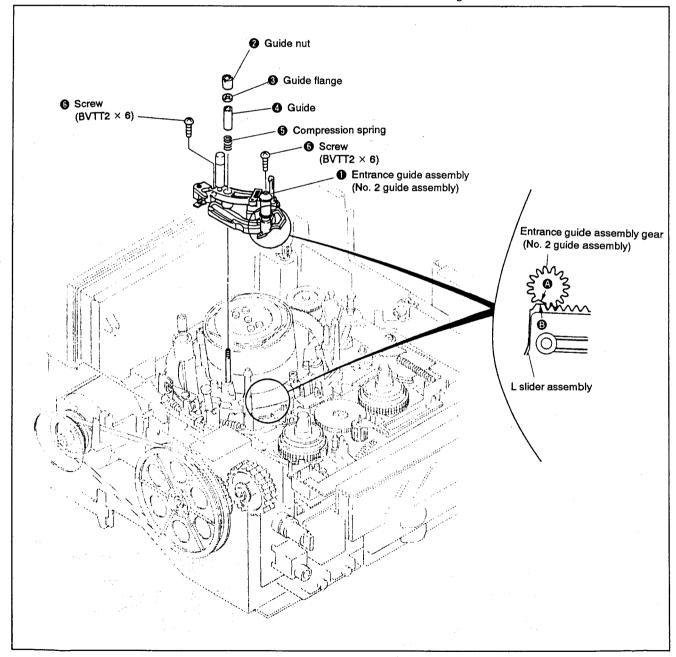


Fig. 7-30.

7-3-12. L Slider Assembly

- 1. Removal (See Fig. 7-31.)
- Remove the slant guide chassis assembly according to 7-3-10. 1. Removal.
- Remove the entrance guide assembly according to 7-3-11.
 Removal.
- 3) Set to DRUM START mode.
- 4) Remove the slant guide driving gear 1.
- 5) Remove the tension regulator load arm assembly ② pin from the cam groove of the tension regulator arm assembly. (See 7-3-5. Tension regulator arm assembly.)
- 6) Remove the two stopper washers 3.
- 7) Remove the L slider assembly while pushing the RL arm assembly knob in the direction of arrow.
- 8) Remove the stopper washer 6 and remove the tension regulator load arm assembly 2.

- 2. Mounting (See Figs. 7-31, through 7-33.)
- 1) Grease. (See Fig. 7-32.)
- 2) Mount the tension regulator load arm assembly 2 and fix the stopper washer 6.
- 3) Mount the L slider assembly **6** while pushing the RL arm assembly knob **6** in the direction of arrow.
- 4) Insert the pin of the tension regulator load arm assembly 2 into the groove of the M slider. (See 7-3-16. M Slider)
- 5) Mount the two stop washers 3.
- 6) Refer to 2) of 7-3-5. 2. Mounting and insert the pin of the tension regulator load arm assembly 2 into the cam groove of the tension regulator arm assembly. (See Fig. 7-10.)
- Operate the mode selector and line up the right sides of the L slider assembly and lock slider assembly. (See 1) of 7-3-10. 2. Mounting.)
- Shift the notch section of the slant guide driving gear one tooth from the leftmost tooth of the L slider assembly, and engage. (See Fig. 7-33.)
- Mount the entrance guide assembly according to 7-3-11.
 Mounting.
- 10) Mount the slant guide assembly according to 7-3-10.2. Mounting.

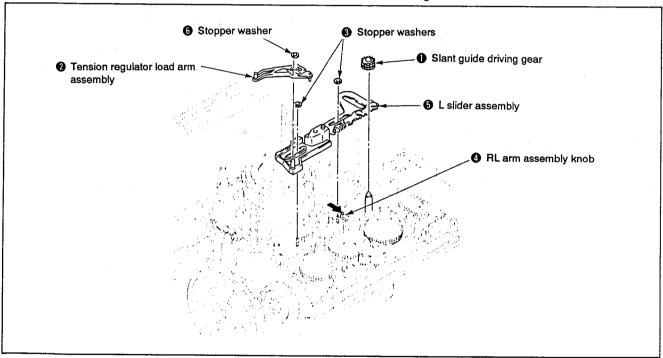


Fig. 7-31.

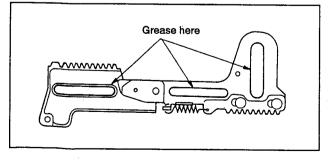


Fig. 7-32.

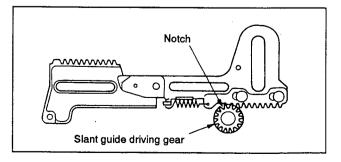


Fig. 7-33.

7-3-13. L-SW Assembly

- 1. Removal (See Fig. 7-34.)
- Remove the L slider assembly according to 7-3-12.
 Removal.
- 2) Remove the lock slider retainer 1.
- 3) Remove the screw 2 and lock slider A 3.
- 4) Remove the stopper washer 4 and remove torsion spring 5.
- 5) Remove the drive change assembly 6.
- 6) Remove the connector **1**.
- 7) Remove the two screws (3) and remove the L-SW assembly (3).

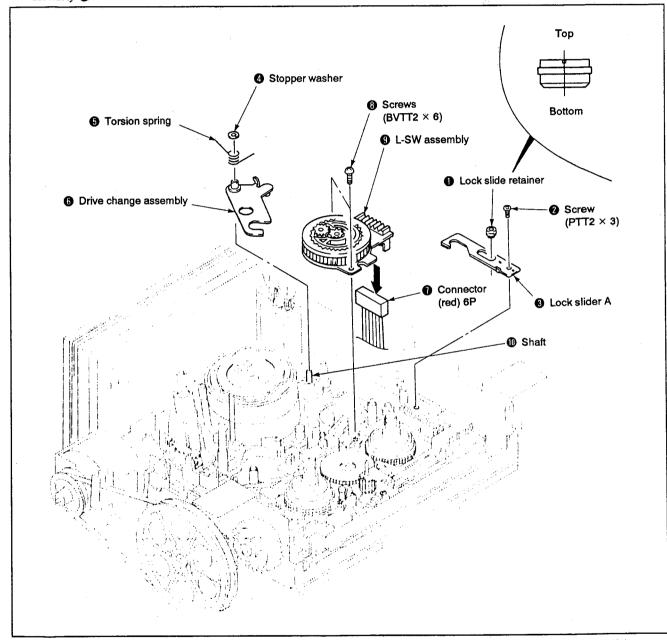


Fig. 7-34.

- 2. Mounting (See Figs. 7-34. through 7-36.)
- 1) Put a half drop of oil on the L-SW assembly (9) shaft (planetary roller shaft).
- 2) Mount the L-SW assembly **9** and tighten with the two screws **8**.
- 3) Connect the connector **1**.
- 4) Operate the mode selector and confirm that the L-SW assembly (9) rotates.
- 5) Put a half drop of oil on the shaft 10.
- 6) Grease the drive change assembly 6 . (See Fig. 7-35.)
- 7) Mount the drive change assembly 6.
- 8) Hook the torsion spring 5 and fix the stopper washer 4.
- 9) Operate the mode selector and confirm that the L-SW assembly 19 rotates.
- 10) Mount the lock slider A 3 and tighten with the screw 2.
- 11) Mount the lock slider retainer 1.
- 12) Operate the mode selector and set to the position in Fig. 7-36.
- 13) Mount the L slider assembly according to 7-3-12.2. Mounting.

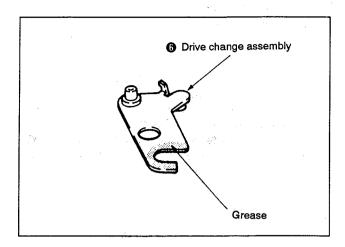


Fig. 7-35.

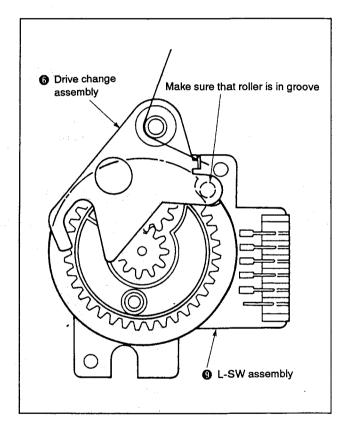


Fig. 7-36.

7-3-14. Brake Plunger

1. Removal (See Fig. 7-37.)

- Open the SP-7 board according to Section 2. DISASSEMBLY 2-6, then remove the CN018 connector (white) 3P.
- 2) Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.
- 3) Remove the tension spring 1.
- 4) Remove the two stopper washers 2.
- 5) Remove the screw 3 and remove lock slider L assembly 4.
- 6) Remove the two screws **6** and remove the brake plunger **6**. (At this time, be sure not to touch or damage the T reel table assembly with a screwdriver.)

2. Mounting (See Fig. 7-37.)

- Insert the brake plunger pin into the P arm hole and mount with the two screws.
 (At this time, be sure not to touch or damage the T reel table assembly with a screwdriver.)
- 2) Mount lock slider L assembly 4 and fix with screw 3.
- 3) Fix the two stopper washers 2.
- 4) Hook the tension spring 1.
- Mount the LS cassette compartment assembly in opposite procedure of Section 2. DISASSEMBLY 2-16.
- 6) Connect the CN018 connector (white) 3P to the SP-7 board.
- Mount the SP-7 board in opposite procedure of Section 2. DISASSEMBLY 2-6.

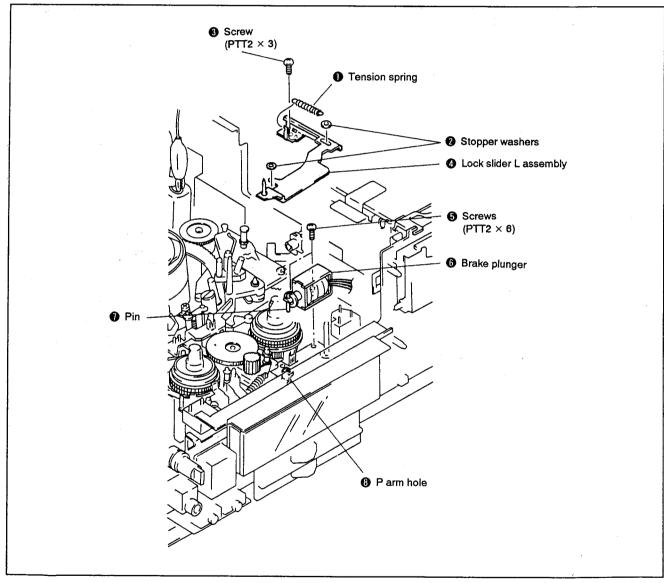


Fig. 7-37.

7-3-15. M-SW Assembly

- 1. Removal (See Figs. 7-38. and 7-39.)
- 1) Remove the T reel table assembly according to 7-3-3. (See Fig. 7-8.)
- 2) Remove stopper washer 1 and remove the driving gear B assembly 2.
- 3) Remove the LD-1 board 3. (See Fig. 7-38.)
- 4) Remove lock slider L assembly according to 7-3-14. 1. Removal, 3) to 5).
- 5) Remove the tension spring 4 and remove B release arm 5.
- 6) Confirm that EJECT mode is set.
- 7) Remove stopper washer **6** and remove the mode output gear **6**.
- 8) Remove the two claws ① of the control motor cover L ③, and remove the push switch ①.
- 9) Disconnect connector 1 .
- 10) Remove three screws **10**, and remove the control motor cover L **13** and the M-SW assembly **15**.
- 11) Remove solder (A) and remove the DC motor (1).

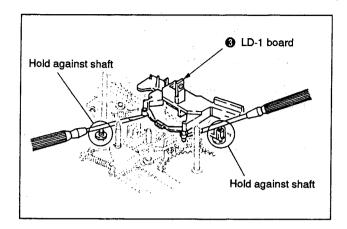


Fig. 7-38.

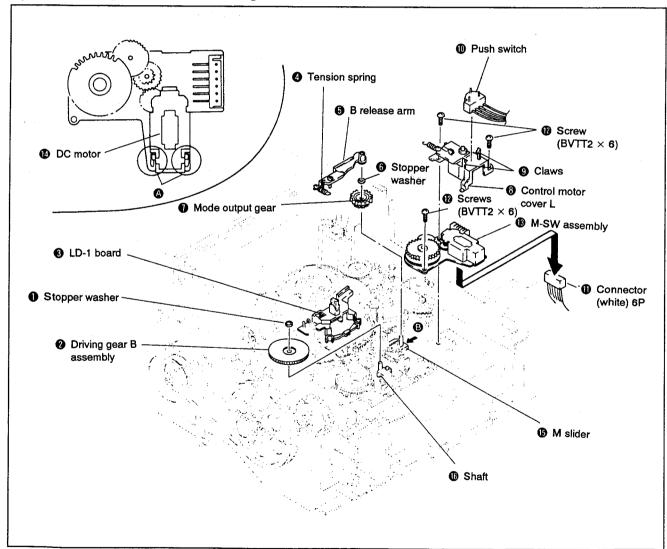


Fig. 7-39.

2. Mounting (See Figs. 7-39. and 7-40.)

- 1) Solder the DC motor 1.
- 2) Mount the M-SW assembly B and the control motor cover L B, and tighten with the three screws D.
- 3) Connect the connector 1.
- 4) Mount the push switch 10.
- 5) Confirm EJECT mode is set.
- 6) Confirm that M slider (1) is moved fully in the direction of arrow (2).
- 7) Put a half drop of oil on the shaft **(b)**. (See Fig. 7-41.)
- 8) Mount the mode output gear 1 so that the positioning holes are lined up. (See Fig. 7-40.)

- 9) Fix stopper washer 6.
- 10) Set to LOADING/UNLOADING mode.
- 11) Mount the B release arm 3 and hook the tension spring 4.
- 12) Mount the lock slider L assembly according to 7-3-14.2. Mounting, 2) to 4).
- 13) Mount the LD-1 board 3.
- 14) Mount the driving gear B assembly ② and fix the stopper washer ①.
- 15) Mount the T reel table assembly according to 7-3-3. 2. Mounting.

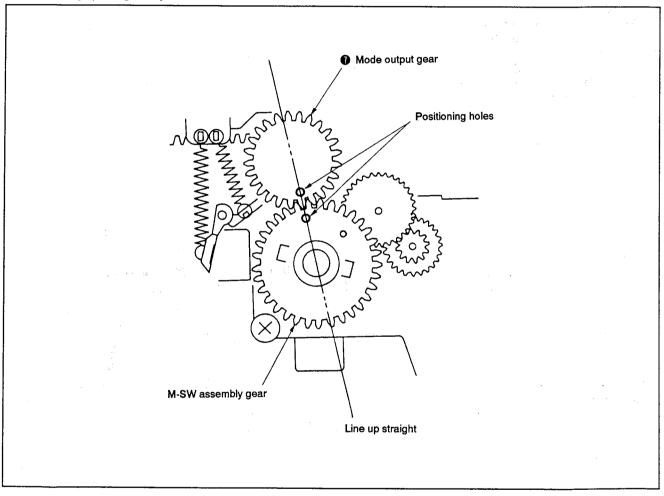


Fig. 7-40.

7-3-16. M Slider

- 1. Removal (See Fig. 7-41.)
- Remove the pinch press arm assembly according to 7-3-4.
 Removal. (See Fig. 7-9.)
- Remove the tension regulator arm assembly according to 7-3-51, Removal. (See Fig. 7-10.)
- 3) Remove the tension regulator band assembly according to 7-3-6. 1. Removal. (See Fig. 7-11.)
- Remove the threading ring assembly according to 7-3-8.
 Removal. (See Fig. 7-13.)
- 5) Perform 7-3-15. 1. Removal, 1) to 5). (See Figs. 7-38. and 7-39.)
- 6) Remove the tension regulator load arm assembly according to 7-3-12. 1. Removal, 8). (See Fig. 7-31.)
- 7) Remove the tension spring 1
- 8) Remove the two stopper washers ② and remove the S main brake assembly ③ and the T main brake assembly ④.

- Set to LOADING TOP and LOADING/UNLOADING modes.
- 10) Remove the two screws **3** and the driving complete assembly **6**.
- 11) Perform 7-3-15. 1. Removal, 6). and 7). (See Fig. 7-39.)
- 12) Remove the two tension springs 1.
- 13) Remove the REW brake assembly (3).
- 14) Remove the stopper washer (9) and remove the B release slider (10).
- 15) Remove stopper washer **(1)**, and remove the ring lock spring **(2)** and RL arm **(3)**.
- 16) Move the M slider to the right. (Leave about 5 mm at the left.)
- 17) Remove the E ring (1) and remove the pinch press lever assembly (1).
- 18) Remove the spring **1** and remove the hard brake S **1**.
- 19) Remove the stopper washer (19), push the mode arm (20) in the direction of the arrow, and lift up the left side of the M slider (10) to remove.

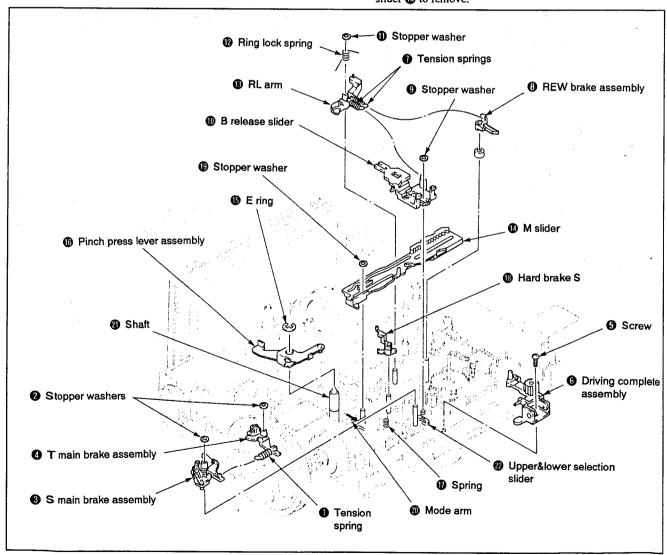


Fig. 7-41.

- 2. Mounting (See Figs. 7-41. through 7-44.)
- 1) Grease. (See Fig. 7-42.)
- 2) Push mode arm ② in the direction of the arrow, and mount the M slider ③, noting the positioning of the other parts in Fig. 7-45, and fix the stopper washer ⑤.
- 3) Mount the hard brake S (1) and hook the spring (1).
- 4) Grease. (See Fig. 7-44.)
- 5) Put a half drop of oil from the shaft **(1)** groove to the bottom, mount the pinch press lever assembly **(1)** and insert the E ring **(1)**.
- 6) Mount the RL arm (3), hook the ring lock spring (2) and fix the stopper washer (1).
- 7) Mount the B release slider **(1)** and fix stopper washer **(9)**.
- 8) Mount the REW brake assembly 3.
- 9) Hook the two tension springs 1.

Note: Hook the two springs as follows, being careful not to mix them up.

- B release slider spring:
 - ····· total diameter 2 mm, wire diameter 0.18 mm
- REW brake assembly spring:
 - ····total diameter 1.6 mm, wire diameter 0.12 mm
- 10) Move the M slider 10 fully to the left.
- 11) Perform 7-3-15. 2. Mounting, 7), 8) and 9).
- 12) Set to LOADING/UNLOADING mode.
- 13) Insert the driving complete assembly 6 horizontal shaft into the upper & lower selection slider 20 groove, and mount with the two screws 6.
- 14) Mount the T main brake assembly **4** and S main brake assembly **3**. Fix the two stopper washers **2** to one assembly each and hook the tension spring **1**.
- 15) Mount the tension regulator load arm assembly according to 7-3-12. 2. Mounting, 2).
- 16) Perform 7-3-15. 2. Mounting, 11) to 15).
- 17) Mount the threading ring assembly according to 7-3-8. 2. Mounting.
- 18) Mount the tension regulator band assembly according to 7-3-6. 2. Mounting.
- 19) Mount the tension regulator arm assembly according to 7-3-5. 2. Mounting.
- 20) Mount the pinch press arm assembly according to 7-3-4. 2. Mounting.

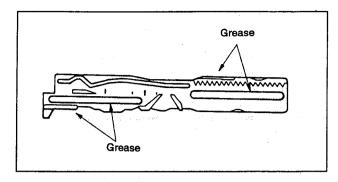


Fig. 7-42.

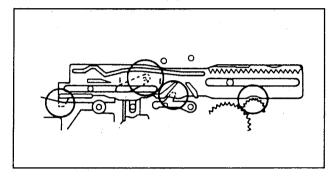


Fig. 7-43.

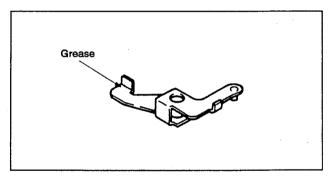


Fig. 7-44.

7-3-17. Capstan Motor

- 1. Removal (See Fig. 7-45.)
- Remove the threading ring assembly according to 7-3-8.
 Removal. (See Fig. 7-13.)
- 2) Open the SP-7 board according to Section 2. DISASSEMBLY 2-6.
- 3) Remove the connector 1 from the SP-7 board.
- 4) Remove the connector 2 from the RS-17 board.
- 5) Remove the two screws 3 and remove the rotor holding plate 4.
- 6) Remove the two screws **6** and remove the capstan motor **6** in the direction of the arrow.

- 2. Mounting (See Fig. 7-45.)
- 1) Mount the capstan motor **6** and tighten with two screws **6**.
- 2) Mount the rotor holding plate 4 and fix with two screws 3.
- 3) Connect the connector 1 to the SP-7 board and connector 2 to the RS-17 board.
- 4) Mount the threading ring assembly according to 7-3-8.2. Mounting. (See Figs. 7-13 and 7-14.)
- 5) Mount the SP-7 board in opposite procedure of Section 2. DISASSEMBLY 2-6.

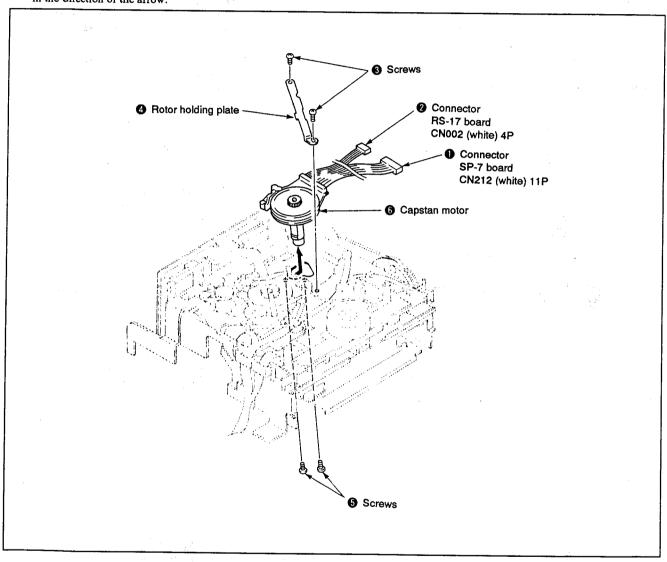


Fig. 7-45.

7-3-18. Replacement of Rotary Upper Drum

1. Removal

- · If recording is possible, remove after recording.
- Remove the fly wheel according to 7-3-1. 1. Removal.
- Remove the two hexagonal bolt screws 1, and remove the dynamic damper 2. (See Fig. 7-46.)
- 3) Remove all ten solders in section (A) and confirm that the board and the pins on the bottom can move freely, using tweezers or the like. (See Fig. 7-46.)
- 4) Remove the two screws $(M2 \times 5)$ 3. (See Fig. 7-46.)
- 5) Mount the jig (B) (Ref. No. J-11) by inserting the two supplied screws (4) into the screw holes where the dynamic damper was mounted, tighten the supplied hexagonal socket screw (5) into the jig (B), and remove the rotary upper drum (5). (See Fig. 7-47.)

Repair rotary upper drum assembly DGR-35-R A-7049-188-A

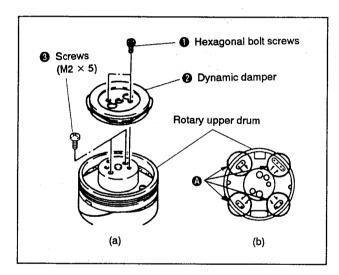


Fig. 7-46.

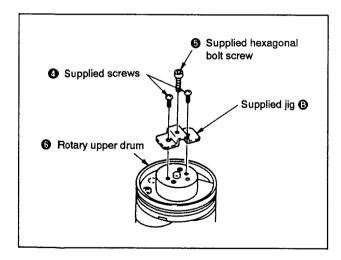


Fig. 7-47.

2. Mounting

- Clean the flange surface and the surface of the rotary upper drum which contacts it, and confirm that there is no dirt or scratches.
- 2) Lightly push in the rotary upper drum while using the jig (Ref. No. J-11) to line up the rotary upper drum (3) and positioning holes (3). Confirm that the pins are above the board hole of the rotary upper drum at this time. Use tweezers, etc. for correction if the pins catch. (See Fig. 7-48.)
- 3) Remove jig **(a)** and push the rotary upper drum in by hand, lightly. (See Fig. 7-49.) When it is not inserted all the way, tighten the two screws (M2 × 5) **(3)** alternately to temporarily fix it.
- 4) Insert jig into the positioning hole again and confirm that it goes in smoothly. If not, loosen the two screws (M2 × 5) and adjust it by inserting a precision screwdriver into the hole.
- 5) Tighten the two screws $(M2 \times 5)$ 3.

Note: Be careful not to tighten too much.

Solder the pins in section A. (See Fig. 7-46.)

Note: Be careful that the solder does not go under the

 Mount the dynamic damper with two hexagonal bolt screws 1. (See Fig. 7-46.)

Note: Be careful not to tighten too much.

8) Mount the fly wheel according to 7-3-1. 2. Mounting.

Note: After mounting, be sure to perform 7-4. TAPE PATH ADJUSTMENT.

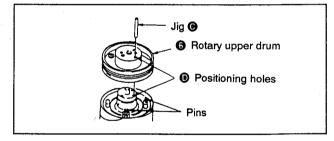


Fig. 7-48.

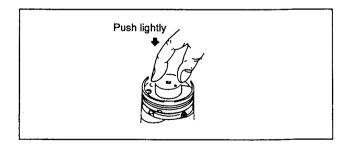


Fig. 7-49.

7-3-19. Drum Assembly Replacement [Precautions for mounting the drum assembly]

- 1. When using a magnetized screwdriver for mounting the drum assembly, attach in the position shown in the diagram below to prevent the magnetized screwdriver from affecting the head tip position.
- After mounting, be sure to perform 7-4. TAPE PATH ADJUSTMENT.

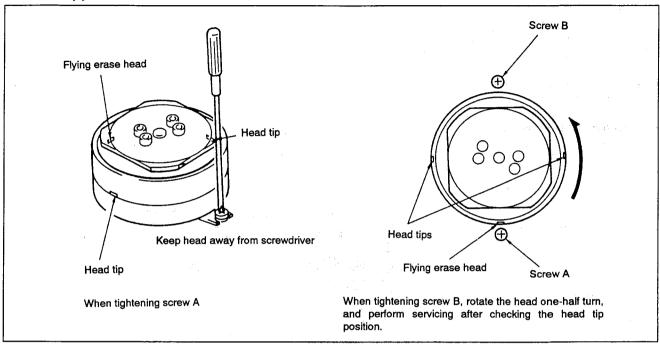


Fig. 7-50.

- 1. Removal (See Fig. 7-51, and 7-52.)
- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY, 2-16.
- 2) Open the SP-7 board according to Section 2. DISASSEMBLY, 2-6.
- 3) Remove the fly wheel according to 7-3-1. 1. Removal
- 4) Remove the screw 1 and remove the shaft ground terminal 2. (See Fig. 7-51.)
- 5) Remove the three connectors 3.
- 6) Remove the two screws 4.
- 7) Remove the drum assembly 6.

Note: Make sure that the drum assembly does not come into contact with the No. 3 guide and IP roller guide, etc., at this time.

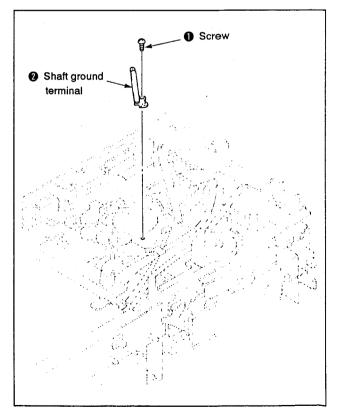


Fig. 7-51.

2. Mounting (See Fig. 7-51. and 7-52.)

- 1) Mount the drum assembly 6 with the two screws 4.
- 2) Connect the three connectors 3.
- 3) Mount the shaft ground terminal 2 with the screw 1. (See Fig. 7-51.)
- 4) Mount the fly wheel according to 7-3-1. 2. Mounting.
- 5) Mount the SP-7 board by the opposite procedure of Section 2. DISASSEMBLY, 2-6.
- 6) Mount the LS cassette compartment assembly by the opposite procedure of Section 2. DISASSEMBLY, 2-16.

Note: After mounting, be sure to perform 7-4. TAPE PATH ADJUSTMENT.

Drum Assembly for Repair DGH-35A-R A-7048-201-A

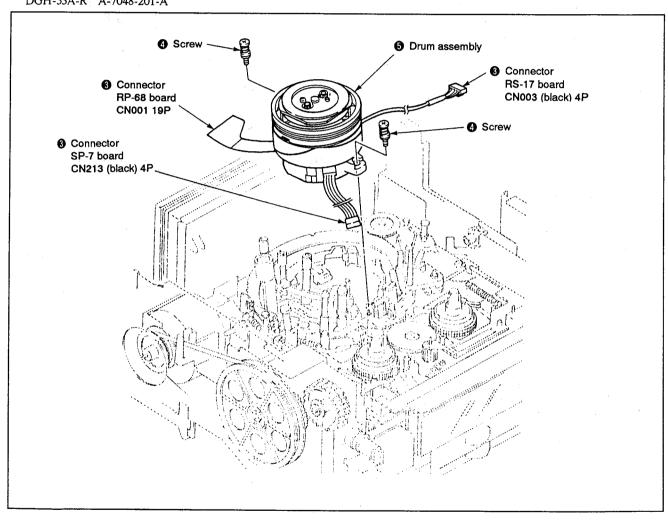


Fig. 7-52.

7-3-20. Adjustment after Replacement of No. 3 Guide and No. 4 Guide

For replacement of both No. 3 and No. 4 guides, line up the tape along the upper flange after replacing.

7-3-21. No. 5 Guide Assembly

- 1. Removal (See Fig. 7-53.)
- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.
- 2) Remove the fly wheel according to 7-3-1. 1. Removal.
- 3) Remove the three screws **1** and remove the No. 5 guide assembly.
- 4) Remove the guide nut ② and remove No. 5 guide boss ③, No. 5 guide flange ④, No. 5 guide ⑤ and compression spring ⑥.

2. Mounting (See Fig. 7-53.)

- Mount the compression spring 6, No. 5 guide 6, No. 5 guide flange 4 and No. 5 guide boss 3 to the No. 5 guide shaft 7, and tighten the guide nut 2.
- 2) Mount the No. 5 guide assembly and tighten with the three screws 1.
- 3) Mount the fly wheel according to 7-3-1. 2. Mounting.
- Mount the LS cassette compartment assembly in opposite procedure of Section 2. DISASSEMBLY 2-16.

Note: Be sure to perform 7-4. TAPE PATH ADJUSTMENT after mounting.

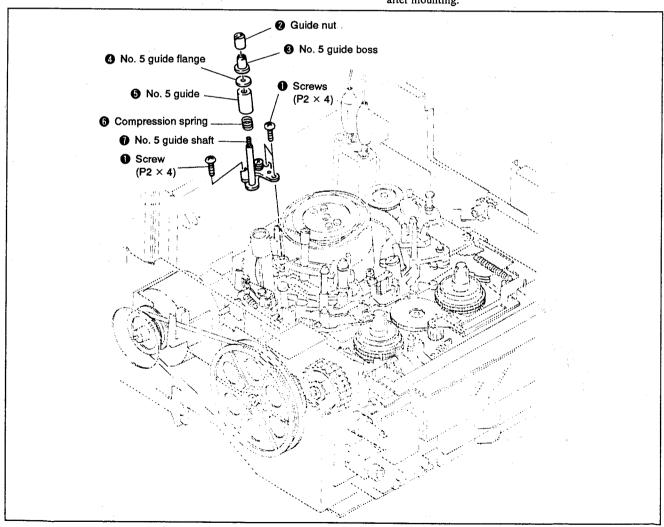


Fig. 7-53.

7-3-22. FWD Back Tension Adjustment (See Fig. 7-54.)

- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.
- Remove the mechanism block according to Section 2. DISASSEMBLY 2-15.
- 3) Set to LOADING END, FWD modes.
- 4) Loosen band adjustment plate \bullet screw 2 and move the band adjustment plate \bullet in the direction of arrow A. And confirm the range of movement θ for No. 1 guide.
- 5) Tighten the screw 2 so that the position of No. 1 guide cap is $1/3 \theta$
- 6) Place the tension measurement reel (Ref. No. J-7) ② on the S reel table assembly ③ and set the tape along No. 1 guide, No. 2 guide, No. 3 guide, IP roller guide and the drum.
- 7) Pull the dial tension gauge (Ref. No. J-6) § in the direction of arrow § and hook the spring ¶ onto the tension regulator spring hook assembly § so that the value becomes 13.0 ± 1g, as shown below.

Value too large: arrow (a) direction Value too small: arrow (b) direction

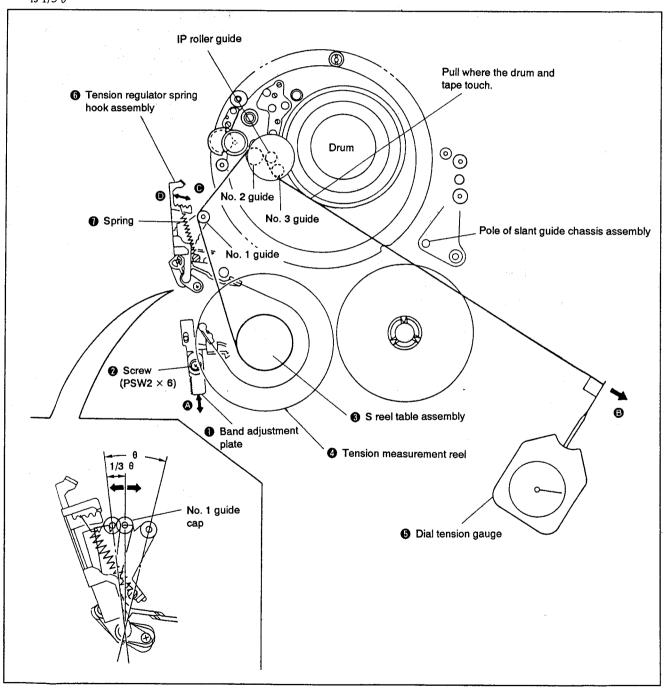


Fig. 7-54.

7-3-23. Reel Motor Replacement

- 1. Removal (See Fig. 7-55.)
- 1) Open the SP-7 board according to Section 2. DISASSEMBLY, 2-6.
- 2) Remove the two screws 1 and remove the reel motor bracket 2.
- 3) Remove the connector 3.
- 4) Remove the three screws **4** and remove the reel motor **5** in the direction of arrow.
- 2. Mounting (See Fig. 7-55.)
- 1) Mount the reel motor **5** to the reel motor bracket **2** with the three screws **4**.
- 2) Mount the connector (3).
- 3) Mount the reel motor assembly with the two screws 1.
- 4) Mount the SP-7 board by the opposite procedure of Section 2. DISASSEMBLY, 2-6.

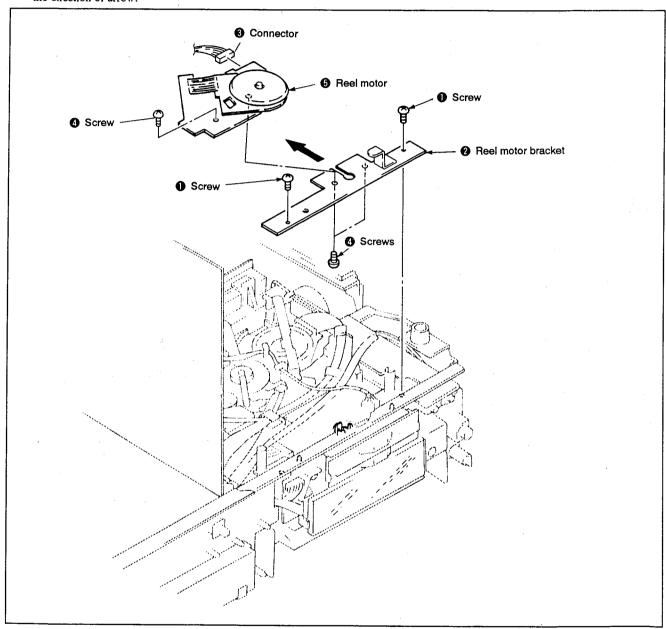


Fig. 7-55.

7-3-24. Check of S and T Main Brake Torques

- 1) Remove the front panel according to Section 2. DISASSEMBLY 2-2.
- 2) Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.

1. S main brake torque (See Figs. 7-56. and 7-57.)

- 1) Set to FF/REW mode.
- Place the tension measurement reel (Ref. No. J-8) on the S reel table.
- 3) Pull the dial tension gauge (Ref. No. J-6) in the direction of the arrow and confirm that the specifications are satisfied.

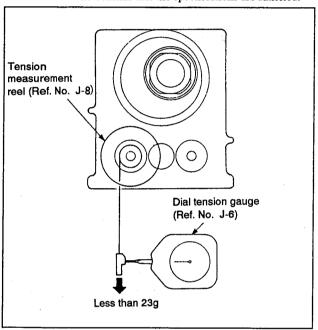


Fig. 7-56.

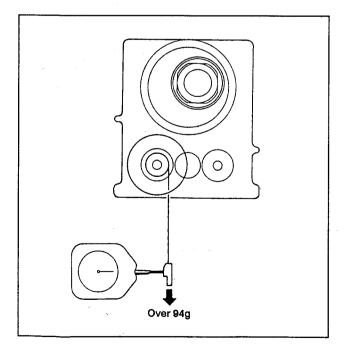


Fig. 7-57.

2. T main brake torque (See Figs. 7-58. and 7-59.)

- 1) Set to FF/REW mode.
- Place the tension measurement reel (Ref. No. J-8) on the T reel table.
- 3) Pull the dial tension gauge (Ref. No. J-6) in the direction of the arrow and confirm that the specifications are satisfied.

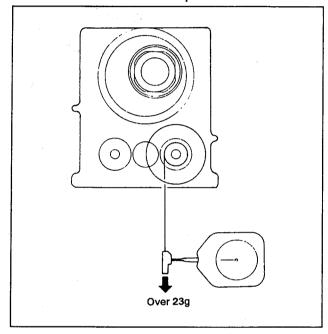


Fig. 7-58.

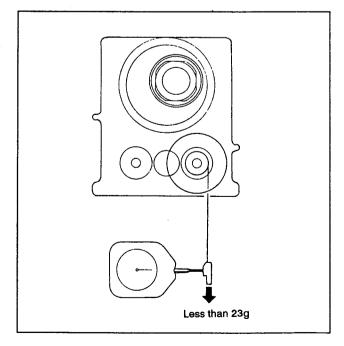


Fig. 7-59.

7-3-25. Check of S and T Soft Brake Torques

- 1) Remove the front panel according to Section 2. DISASSEMBLY 2-2.
- Remove the LS cassette compartment assembly according to Section 2. DISASSEMBLY 2-16.

1. S soft brake torque (See Fig. 7-60.)

- 1) Set to FF/REW mode.
- Place the tension measurement reel (Ref. No. J-8) on the S reel table.
- 3) Release the S main brake with a finger.
- 4) Pull the dial tension gauge (Ref. No. J-6) in the direction of the arrow and confirm that the specifications are satisfied.

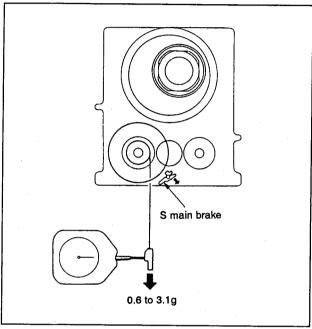


Fig. 7-60.

2. T soft brake torque (See Fig. 7-61.)

- 1) Set to REV mode.
- Place the tension measurement reel (Ref. No. J-8) on the T reel table.
- 3) Release the T main brake with a finger.
- 4) Pull the dial tension gauge (Ref. No. J-6) in the direction of the arrow and confirm that the specifications are satisfied.

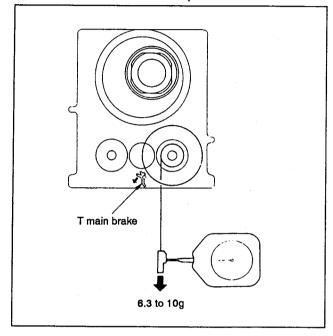


Fig. 7-61.

7-3-26. Check of REW Brake Torque (See Fig. 7-62.)

- 1) Set to FF/REW mode.
- 2) Place the tension measurement reel (Ref. No. J-8) on the T reel table.
- 3) Release the T main brake with a finger.
- 4) Pull the dial tension gauge (Ref. No. J-6) in the direction of the arrow and confirm that the specifications are satisfied.

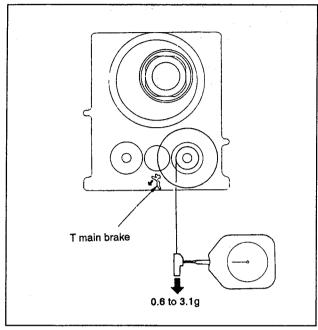
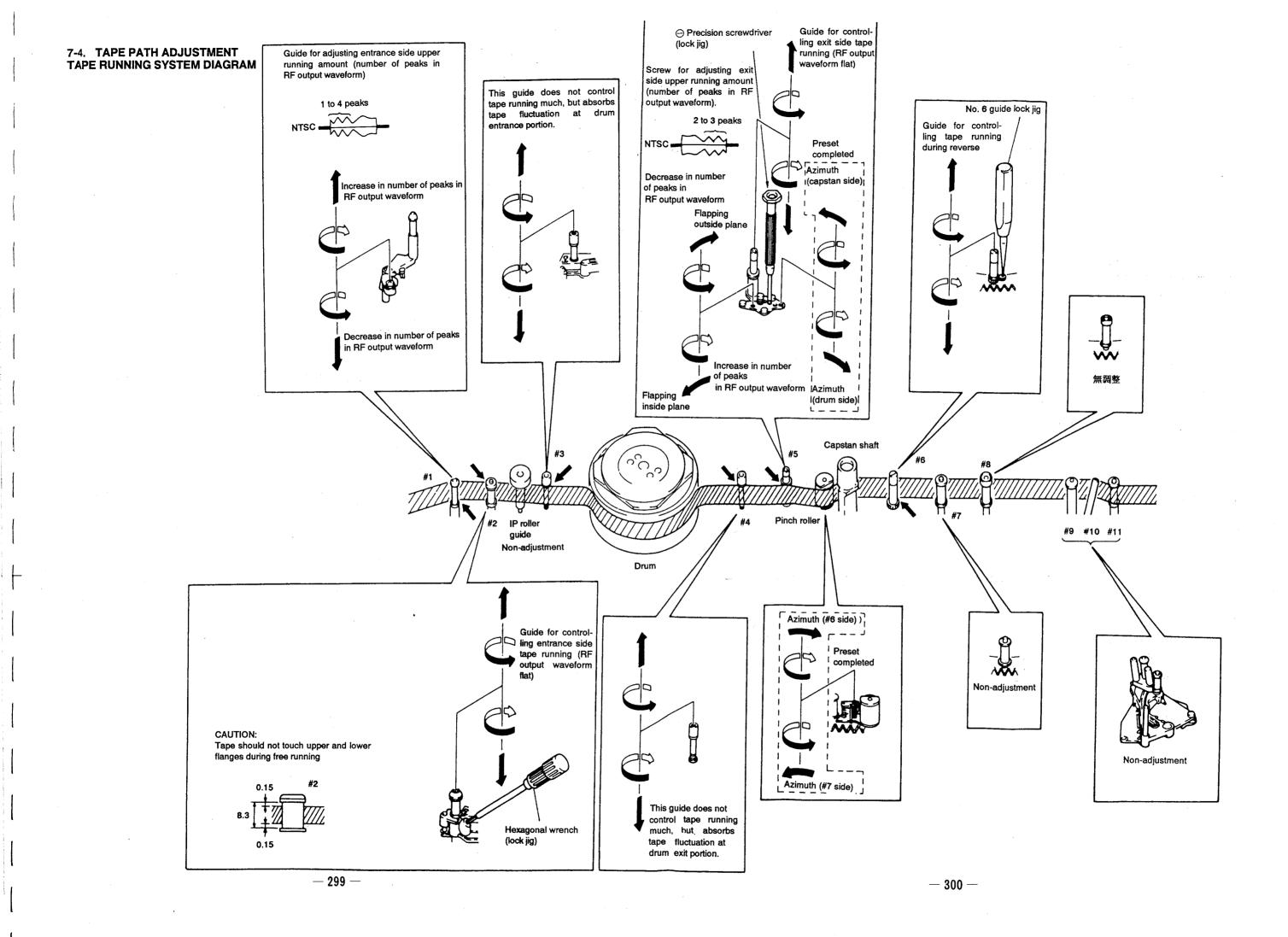


Fig. 7-62.

7-3-27. Check by FWD and RVS Winding Torque Cassette

- Insert the FWD and RVS winding torque cassette (Ref. No. J-12).
- 2) Set to playback mode and confirm that T reel table torque is 7.5 to 14.5 g*cm.
- 3) Replace on appropriate reel table if the above specifications are not satisfied.



[Regarding track shift & monitor jig]

The 8 mm video system employs a high precision tracking ATF (auto track finding) which instantaneously controls the tape running speed with the four kinds of pilot signals. In this way, the tracking adjustment knob becomes obsolete, and accurate tracing has become possible.

On the other hand however, there has been difficulty in adjusting the tape path system with the ATF method, that is it was impossible to make a perfect adjustment because the ATF automatically corrected even small head-tracing errors.

Because of this, adjustment is carried out to the tape path system by using the track shift & monitor jig (Ref. No. J-6080-843-A). As the track shift & monitor jig forcibly releases the ATF and sets the tracking amount (track shift) manually, the adjustment of the tape path system can easily be carried out.

• Perform this adjustment after confirming that Section 8. ELECTRICAL ADJUSTMENT is completed.

7-4-1. Connection of Track Shift & Monitor Jig

(For details, see the INSTRUCTION MANUAL OF TRACK SHIFT & MONITOR JIG.)

Use the connection cable specially made for EV-S900

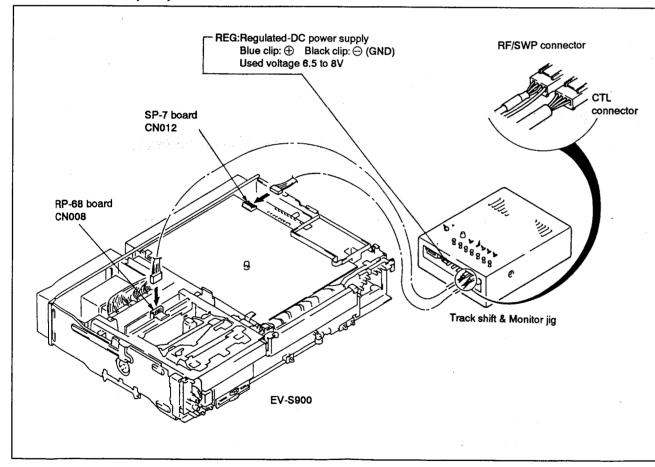


Fig. 7-63.

[Power supply for track shift & monitor jig]

The track shift & monitor jig is equipped with three types of connectors as external power terminals, allowing use from the following three types of power supplies.

| Connector Name | Connected Power Supply |
|----------------|---|
| SYSTEM CONN | Altered AC adaptor AC-V8 for CCD-V8 is connected. (Refer to the instruction manual of the track shift & monitor jig for the alteration method.) |
| AC ADP | AC adaptor AC-M100 for Beta Movie is connected. |
| REG | Commercially available regulated DC power supply (12V, at least 3A) is connected and used at 6.5 to 8V. Make sure \oplus and \ominus are properly connected. |

- * Only one power supply can be used at a time.
- * Use the connector supplied with the track shift & monitor jig for connection.
- * Note that use of power supplies or voltages other than above will cause damage to the unit.
- * When using an altered AC-V8, the power to the circuit will be cut off about 10 seconds after the AC-V8 power switch has been turned off.
- * No power is supplied to the main EV-S900 unit. Supply AC power to the main unit at the same time.

[Connector connection]

Connect the track shift & monitor jig and EV-S900 as shown in Fig. 7-63.

Connect RF/SWP connector to CN008 on the RP-68 board, and the CTL connector to CN012 on the SP-7 board.

[Position setting of respective switches]

| [Position setting of respective switches] | | |
|---|--|--|
| SEL switch When performing track shift, set to | | |
| ON. At OFF position it becomes | | |
| control of EV-S900 side. | | |
| PATTERN switch · · · · Set to EV side. | | |
| ATF LOCK Set to OFF side. | | |
| Other switches are not used when adjusting EV-S900. | | |

7-4-2. Preparation for Adjustment

- 1) Perform cleaning of the tape running surface (the individual tape guides, drum, capstan shaft and pinch roller).
- 2) Connection of oscilloscope
 - 1ch: CH2 checking pin of track shift & monitor jig
 External trigger: RF SWP checking pin of track shift
 & monitor jig
- 3) Set the SEL switch of the track shift & monitor jig to OFF, then play back the alignment tape (WR5-7NE) for tracking, and confirm that the RF waveform of both the entrance and exit sides become flat (Fig. 7-64. (a)).

If the RF waveform of both sides is not flat, the adjustment should be carried out as described below.

- In case the RF waveform on the entrance side is not flat (Fig. 7-64. (a))
 - ···· Perform the adjustment according to 7-4-3. Entrance Side Adjustment.
- In case the RF waveform on the exit side is not flat (Fig. 7-64. ©)
 - ···· Perform the adjustment according to 7-4-4. Exit Side Adjustment.

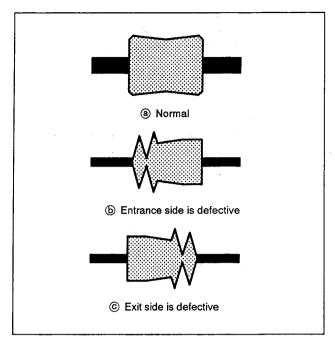


Fig. 7-64.

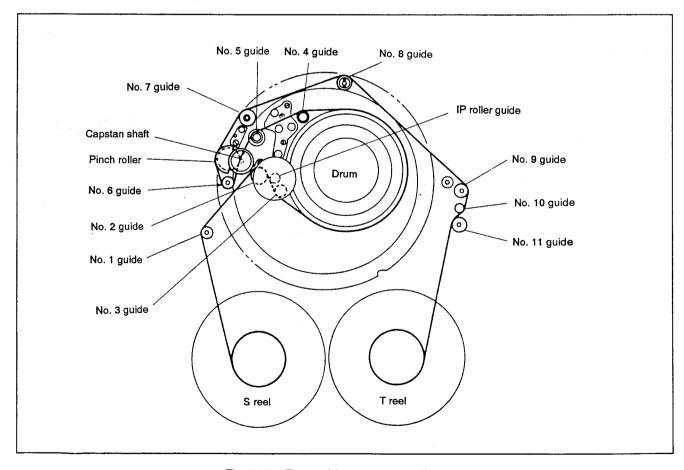


Fig. 7-65. Tape guide arrangement diagram

7-4-3. Entrance Side Adjustment

 Play back the alignment tape (WR5-7NE) for tracking and loosen No. 2 guide lock screw ●, and turn No. 2 and No. 3 guides counterclockwise to free tape running on the entrance side (See Fig. 7-66.)

Note: Since the space between the top and bottom flanges of No. 2 guide is narrow, confirm that the tape is touching neither top nor bottom flanges at this point. Note that if No. 2 guide is loosened too much, the tape touches the bottom flange and the RF waveform on the entrance side exceeds the original free waveform.

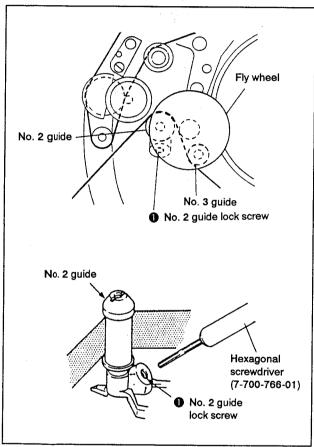


Fig. 7-66.

Confirm that the RF waveform on the entrance side has

 to 4 peaks in this condition. If not, adjust as follows.
 (See Fig. 7-67.)

<less than 1 peak>

Adjust the No. 1 guide (tension regulator arm assembly) height adjustment screw by turning it clockwise 90 $^{\circ}$ at a time. (See Fig. 7-68.)

<more than 4 peaks>

Adjust the height adjustment screw of No. 1 guide (tension regulator arm assembly) by turning it counterclockwise 90° at a time. (See Fig. 7-68.)

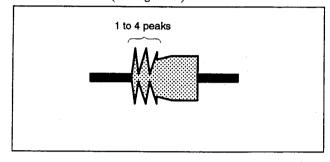


Fig. 7-67.

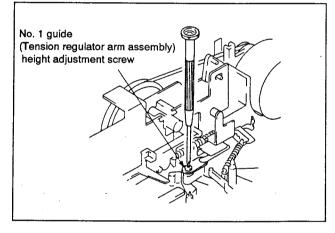


Fig. 7-68.

- 3) Remove the fly wheel according to 7-3-1. 1. Removal.
- Slowly turn the No. 2 guide clockwise to make the entrance side waveform approximately flat. (Fig. 7-69.)
 Note: Do not turn No. 2 guide excessively.
- 5) Set the SEL switch of the track shift & monitor jig to ON, then turn the track shift knob until the RF waveform amplitude becomes 2/3. (See Fig. 7-70.)
- 6) Raise the entrance side waveform slightly by turning No. 2 guide. (See Fig. 7-71.)
- 7) Flatten the waveform with No. 3 guide. (See Fig. 7-72.)
- 8) Tighten No. 2 guide lock screw 1. (See Fig. 7-66.)
- 9) Mount the fly wheel according to 7-3-1. 2. Mounting. (See Fig. 7-6.)

Note: After adjustment is completed, be sure to perform checking in accordance with 7-4-5. Checking After Adjustment.

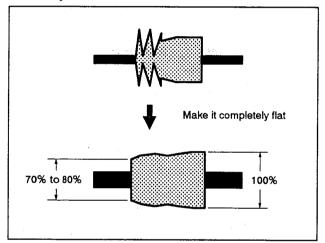


Fig. 7-69.

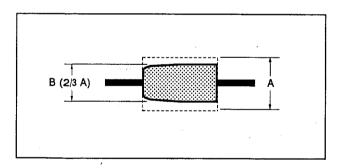


Fig. 7-70.

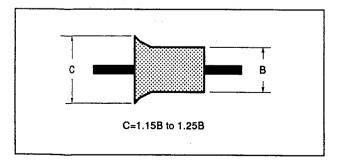


Fig. 7-71.

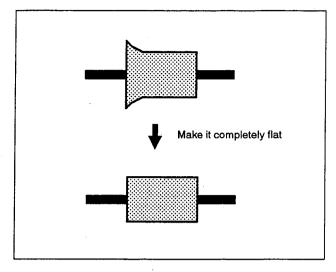


Fig. 7-72.

7-4-4. Exit Side Adjustment

- 1) Play back the alignment tape (WR5-7NE) for tracking and turn No. 4 guide and No. 5 guide counterclockwise to make the tape running on the exit side free. (See Fig. 7-73.)
 - **Note:** If the No. 5 guide nut does not loosen (it is locked with screw-paint), dissolve the paint with alcohol.
 - Confirm that the tape is not touching the bottom of flange of No. 5 guide during free tape running.
- Confirm that the RF waveform on the exit side has 2 to 3 peaks in this condition. If not, adjust as follows.
 (See Fig. 7-74.)

<lf off standard>

- i) Turn the lock screw 1 counterclockwise to loosen.
- ii) Slowly turn the zenith screw 2 clockwise 45° at a time and wait until the RF waveform varies.
- iii) Rotate the lock screw ① clockwise to tighten. (See Fig. 7-73.)
 - Note: The waveform varies if the lock screw is tightened too strongly. Tighten moderately.
 - Never turn the azimuth screw of No. 5 guide.
- 3) Turn the No. 5 guide clockwise to make the RF waveform on the exit side approximately flat. (Fig. 7-75.)
 - Note: The waveform reaction is slow against nut rotation.

 Turn the nut after the waveform variations are stabilized.
- 4) Set the SEL switch of the track shift & monitor jig to ON, then turn the track shift knob until the RF waveform amplitude becomes 2/3. (See Fig. 7-76.)
- 5) Raise the exit side waveform slightly by turning No. 5 guide. (See Fig. 7-77.)
- 6) Turn No. 4 guide so that waveform is flat. (See Fig. 7-78.)

Note: After adjustment is completed, be sure to perform checking in accordance with 7-4-5. Checking After Adjustment.

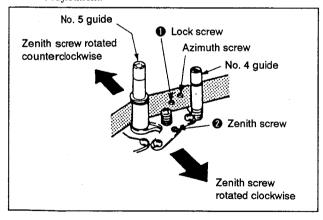


Fig. 7-73.

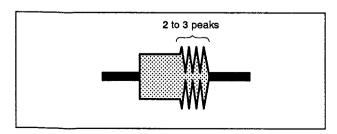


Fig. 7-74.

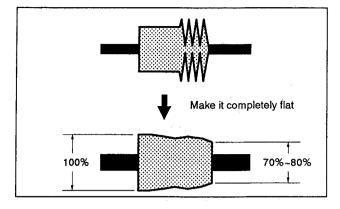


Fig. 7-75.

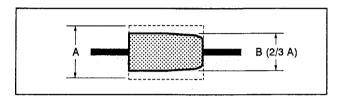


Fig. 7-76.

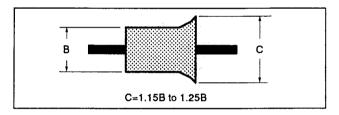


Fig. 7-77.

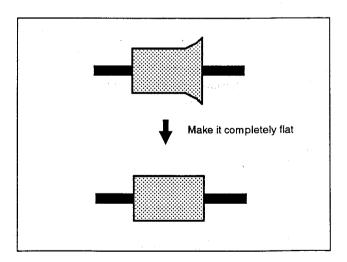


Fig. 7-78.

7-4-5. Checking After Adjustment

- 1. Tracking check
- 1) Play back the alignment tape (WR5-7NE) for tracking.
- 2) Set the SEL switch of the track shift & monitor jig to ON, and turn the track shift knob until the RF waveform amplitude becomes 2/3. (See Fig. 7-79.)
- 3) Confirm that the RF waveform amplitude minimum value (EMIN) at this time is more than 75% of maximum value (EMAX). (See Fig. 7-80.)
- 4) Confirm that the fluctuation amount of both RF waveform entrance and exit sides are as shown in Fig. 7-81.
- 5) Set the SEL switch of the track shift & monitor jig to OFF.
- 6) Set to the REV mode and confirm that the waveform noise pitches are uniform. (See Fig. 7-82.) If not, adjust as follows.

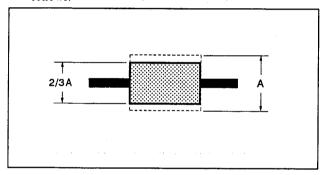


Fig. 7-79.

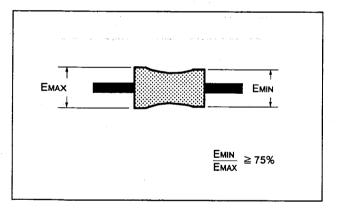


Fig. 7-80.

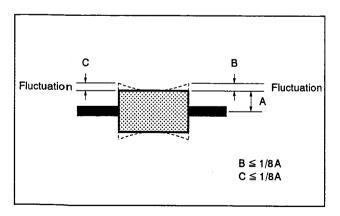


Fig. 7-81.

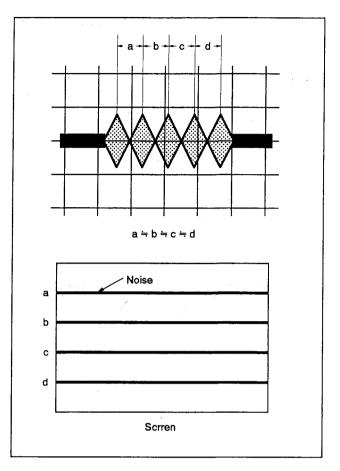


Fig. 7-82.

<Narrow noise pitch on entrance side (upper screen)> (See Fig. 7-83.)

Confirm that the RF waveforms are flat in the PLAYBACK mode.

Waveform is not flat:

Perform height adjustment of No. 2 guide and No. 3 guide according to 7-4-3. Entrance Side Adjustment.

Waveform is flat:

Perform height adjustment of No. 1 guide according to 7-4-3. Entrance Side Adjustment, and check again.

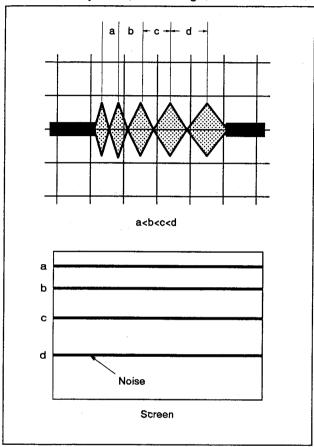


Fig. 7-83.

<Narrow noise pitch on exit side (lower screen)> (See Fig. 7-84.)

Set to the PLAYBACK mode and perform height adjustment of No. 4 guide and No. 5 guide according to 7-4-4. Exit Side Adjustment.

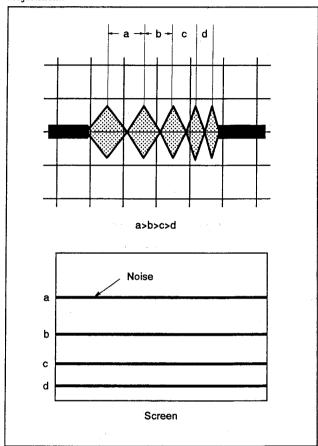


Fig. 7-84.

<Wide noise pitch on exit side (lower screen)> (See Fig. 7-85.)

Set to the PLAYBACK mode and confirm that the RF waveform is flat.

Waveform is not flat:

Perform height adjustment of No. 4 guide and No. 5 guide according to 7-4-4. Exit Side Adjustment.

Waveform is flat:

Turn the guide lower gear counterclockwise with No. 6 guide lock jig (Ref. No. J-10) to loosen, and turn No. 6 guide counterclockwise 45° to tighten the lower gear. Check the RF waveform of the REV mode. (See Fig. 7-86.)

Note: If No. 6 guide is raised too much at this time, wrinkles may occur in section between the capstan shaft and No. 5 guide. Confirm that no wrinkles are occurring. (See Fig. 7-87.)

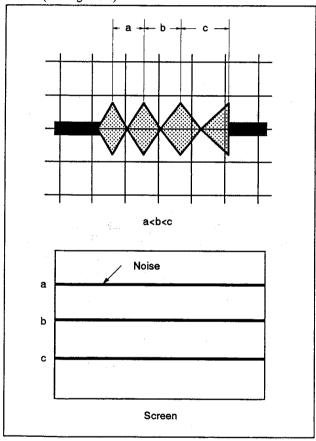


Fig. 7-85.

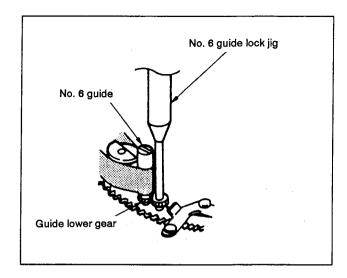


Fig. 7-86.

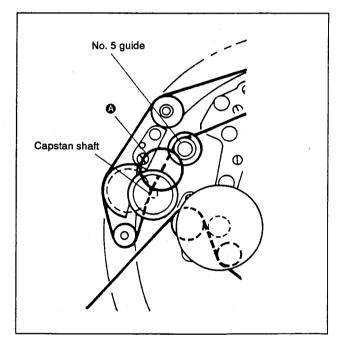


Fig. 7-87.

2. Checking of rising edge

1) Confirm that the RF waveform rises horizontally during playback after completing threading, after CUE/REV, and during playing back after FF. If not, adjust as follows.

<In case noise occurs on the exit side (lower screen) at rising of playback after completing threading> (See Fig. 7-88.)

Confirm that the FWD back tension is not too low.

If too low:

Readjust according to 7-3-22. FWD Back Tension Adjustment. If normal:

Turn the azimuth screw of the pinch roller clockwise 5° at a time and adjust while rechecking the rising edge. (See Fig. 7-89.)

<In case noise occurs on the exit side (lower screen) at rising of playback after REV> (See Fig. 7-88.)

Loosen the lower gear of No. 6 guide using No. 6 guide lock jig, turn No. 6 guide 90° counterclockwise to tighten the guide lower gear, then recheck the rising edge.

Note: If No. 6 guide is raised too much, wrinkles may occur between the capstan shaft and No. 5 guide (in section of Fig. 7-87.). Confirm that no wrinkles are occurring.

<in case noise occurs on the exit side (lower screen) at rising of playback after FF> (See Fig. 7-88.)

Confirm that the FWD back tension is not too low. If too low:

Readjust according to 7-3-22. FWD Back Tension Adjustment.

Turn the azimuth screw of the pinch roller clockwise approx. 5° at a time and adjust while rechecking the rising edge. (See Fig. 7-89.)

Note: After finishing adjustment, be sure to check rising of playback after threading.

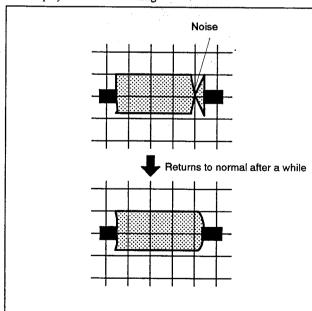


Fig. 7-88.

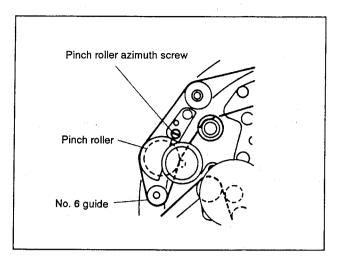


Fig. 7-89.

3. Tape running check

In PLAYBACK and REV modes, confirm the following for the flange sections (arrows in Fig. 7-90.) of guides No. 1 to No. 6: there should be no gaps and the tape should not be curled more than 0.3 mm at tape guides No. 1, No. 2 and No. 5, and there should be neither gaps nor curls at guides No. 3, No. 4 and No. 6.

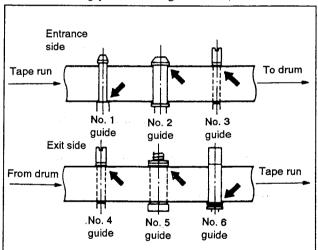


Fig. 7-90.

SECTION 8 **ELECTRICAL ADJUSTMENTS**

During adjustment, refer to the relevant parts arrangement diagrams beginning on page 338.

The following measuring equipment is used for electrical adjustments.

[Equipment to be used]

- 1) Monitor TV
- 2) Dual trace oscilloscope having band of over 10 MHz, incorporating delay mode. (Use 10:1 probe unless otherwise specified)
- 3) Frequency counter
- 4) Pattern generator (Equipped with video output terminal: refer to 8-1-1. Connection of Equipment)
- 5) Digital voltmeter
- 6) Audio generator
- Audio level meter
- 8) Audio distortion meter
- 9) Audio attenuator
- Audio multiplex signal generator 10)
- 11) Alignment tapes

Tracking adjustment (WR5-1NP)

Parts Code: 8-967-995-02

Video frequency response adjustment (WR5-7NE)

Parts Code: 8-967-995-13

Normal mode operation checking

For SP (WR5-5NSP) or (WR5-4NSP)

Parts Code: 8-967-995-42

For LP (WR5-4NL)

Parts Code: 8-967-995-41

Parts Code: 8-967-995-51 Hi8 mode operation checking (ME Tape)

For SP (WR5-8NSE)

Parts Code: 8-967-995-43

For LP (WR5-8NLE)

Parts Code: 8-967-995-52

8-1. PREPARATIONS

8-1-1. Connection of Equipment

Adjustment is performed by connection of the measuring equipment shown in Fig. 8-1., according to the input terminal indications (S VIDEO or VIDEO). The input terminal is indicated by () in the signal column. Either input terminal can be used when there is no indication. The S VIDEO IN terminal has priority. When adjusting using the VIDEO IN terminal input, remove the connector from the S VIDEO IN terminal.

Notes: 1) If adjustment is performed by VIDEO input when S VIDEO input is indicated, the product specifications for this unit may not be satisfied. Be sure to follow the indications.

> 2) When performing adjustment using a VCR equipped with an S video output terminal as the signal source, the performance of this unit may be affected by that VCR. Try to use a pattern generator with a Y/C separation output terminal if possible.

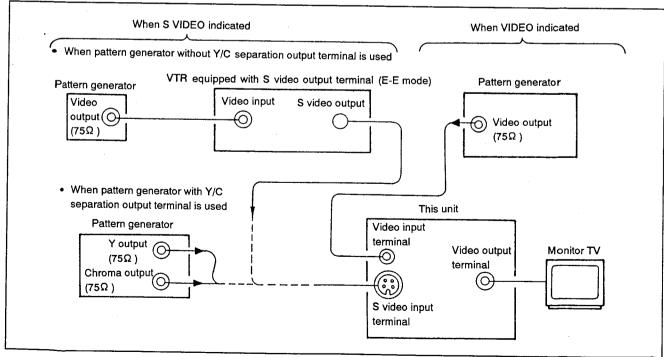


Fig. 8-1.

8-1-2. Confirmation of Input Signal

As adjustment is made using a video signal obtained from a pattern generator as the adjustment signal, it is necessary to confirm that the video output signal is within the required specifications.

1. S VIDEO input

Connect an oscilloscope to the Y signal terminal of the S video input terminal (CNJ701 on IO-17 board) and confirm that the sync signal of the Y signal is approximately 0.3 Vp-p and the amplitude of the video section is approximately 0.7 Vp-p. (When using a VCR equipped with an S video output terminal, confirm that there is no residual chroma signal or burst signal.) Next, connect the oscilloscope to the chroma signal terminal of the S video input terminals and confirm that the burst signal amplitude of the chroma signal is approximately 0.3 Vp-p and flat, and that the amplitude ratio of the burst signal to the chroma signal is 0.30:0.66. The Y and chroma signals used for adjustment are shown in Fig. 8-2.

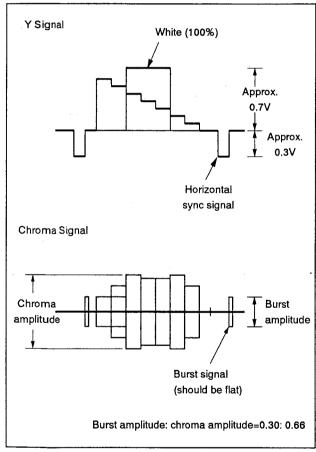


Fig. 8-2. Pattern generator color bar signal

2. VIDEO input

Connect an oscilloscope to the video input terminal (CNJ701 on IO-17 board) and confirm that the amplitude of the sync signal of the video signal is approximately 0.3V and the amplitude of the video section is approximately 0.7V. Confirm that the burst signal amplitude is approximately 0.3V and flat, and that the level ratio of the burst signal and red signal is 0.30:0.66.

The video signal (color bars) used for adjustment are shown in Fig. 8-3.

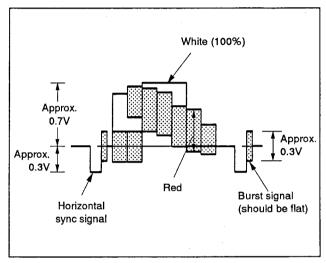


Fig. 8-3. Pattern generator color bar signal

[Alignment tapes]

The alignment tapes shown in the table below are available. Use the tape indicated in the signal column of each adjustment section.

When a specific name is not given for use of an operation checking tape, any of the operation checking tapes can be used.

| Nam e | Recording | g Tape Tape | Contents | | Use | |
|---|-----------|-------------|----------|---|---|--|
| | Speed | Video Area | PCM Area | | | |
| Tracking WR5-1NP | STD | MP | SP | CH2: Signal for 1 MHz tape path Marker (CH1: 9 MHz) for | n adjustment switching position adjustment | Tape path adjustment Switching position adjustment |
| Video frequency response WR5-7NE | Hi8 | ME | SP | RF sweep 0 to 15 MHz Markers 2, 4.5, 7, 8.5, 10 MHz | | Frequency response adjustment |
| Operation checking WR5-4NSP or WR5-5NSP | STD | МР | SP | Monoscope 4 minutes • Audio signal (AFM) 400 Hz, 60% modulation 20 Hz 20 seconds 400 Hz 20 seconds Repeated 14 kHz 20 seconds four times | Monoscope section 20 Hz 20 seconds 400 Hz 20 seconds Repeated | |
| WR5-8NSE | Hi8 | МЕ | SP | | Operation checking | |
| WR5-4NL | STD | MP | LP | Video signals Color bars 4 minutes Monoscope 4 minutes Audio signal (AFM) 400 Hz, 60% modulation | | |
| WR5-8NLE | Hi8 | ME | LP | | | |

Note: Recording modes

STD Conventional mode Hi8 High band mode

The 75% color bar signal recorded on the alignment tape is shown in Fig. 8-4.

Note: Measured at VIDEO OUT terminal (terminated at 75Ω)

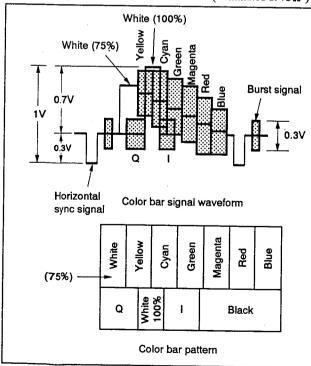


Fig. 8-4. Color bar signal on alignment tape

Tape Types

MP ····· Metal particle tape
ME ···· Metal evaporated tape

[I/O level and impedance]

Video input Pin jack

Input signal: 1 Vp-p, 75Ω unbalanced,

negative SYNC

Video output Pin jack

Output signal: 1 Vp-p, 75Ω unbalanced,

negative SYNC

S video input (4-pin mini DIN)

Luminance signal: 1 Vp-p, 75Ω unbalanced,

negative SYNC

Color signal: 0.286 Vp-p, 75Ω , unbalanced

S video output (4-pin mini DIN)

Luminance signal: 1 Vp-p, 75Ω unbalanced,

negative SYNC

Color signal: 0.286 Vp-p, 75Ω , unbalanced

Audio input Pin jack

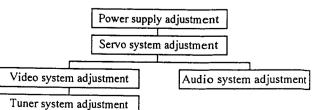
Input level: -7.5 dBs (0 dBs=0.775 Vrms)

Audio output Pin jack

Rated output: -7.5 dBs (with 47 k Ω load) Output impedance: Less than 2.2 k Ω

[Adjustment order]

Perform adjustment in the following order.



8-1-3. Recording Mode Selection (Hi8 mode/Normal mode)

The recording mode (Hi8 mode/Normal mode) of this unit is selected as shown in the table below. The playback mode (Hi8 mode/Normal mode) is automatically selected according to the mode in which the tape was recorded.

| High Band (STD mode/Hi8 mode select switch) (SW062 on FT-37 board) | S Video Input Terminal (CNJ701 on IO-17 board) | Tape Used | Recording Mode |
|--|---|-----------|----------------|
| | | Hi8 ME | 11:0 |
| | Not relevant | Hi8 MP | Hi8 |
| | | MP | STD |
| | | Hi8 ME | Hi8 |
| Auto (Hi8 mode) | Connector inserted Nothing inserted | Hi8 MP | |
| | | MP | STD |
| | | Hi8 ME | STD |
| | | Hi8 MP | |
| | | MP | |
| | | Hi8 ME | |
| Off (STD mode) | Not relevant | Hi8 MP | STD |
| • | | MP | 7 |

8-2. POWER SUPPLY BLOCK ADJUSTMENT

8-2-1. Oscillation Frequency Adjustment (DR-35 Board)

| Mode | E-E | |
|----------------------|-------------------|--|
| Measurement Point | Collector of Q201 | |
| Measuring Instrument | Frequency counter | |
| Adjustment Element | RV201 | |
| Specified Value | 91 ± 2 kHz | |

Adjustment method:

1) Adjust with RV201 to 91 \pm 2 kHz.



Fig. 8-5.

8-2-2. REG 5V Adjustment (DR-35 Board)

| Mode | E-E |
|----------------------|--------------------|
| Measurement Point | Pin ③ of CN201 |
| Measuring Instrument | Digital multimeter |
| Adjustment Element | RV202 |
| Specified Value | 5.3 ± 0.1 Vdc |

Adjustment method:

1) Adjust with RV202 to 5.3 ± 0.1 Vdc.

8-2-3. REG 9V Adjustment (DR-35 Board)

| Mode | E-E |
|----------------------|--------------------|
| Measurement Point | Pin ① of CN203 |
| Measuring Instrument | Digital multimeter |
| Adjustment Element | RV203 |
| Specified Value | 9.1 ± 0.2 Vdc |

Adjustment method:

1) Adjust with RV203 to 9.1 \pm 0.2 Vdc.

8-2-4. Voltage Check (DR-35 and DT-63 Boards)

| Mode | E-E |
|----------------------|-------------------------------|
| Measuring Instrument | Digital multimeter |
| UNSW 5V Check | |
| Measurement Point | Pin ② of CN203 on DR-35 board |
| Specified Value | 5.4 ± 0.1 Vdc |
| DRIVE 9V Check | |
| Measurement Point | Pin ④ of CN202 on DR-35 board |
| Specified Value | 9.1 ± 0.2 Vdc |
| UNSW 38V Check | |
| Measurement Point | Pin ② of CN104 on DT-63 board |
| Specified Value | 36.5 ± 0.8 Vdc |
| UNSW -30V Chec | k |
| Measurement Point | Pin ④ of CN104 on DT-63 board |
| Specified Value | -29 ± 0.8 Vdc |
| UNSW 9V Check | |
| Measurement Point | Pin ① of CN105 on DT-63 board |
| Specified Value | $8.8 \pm 0.2 \text{Vdc}$ |
| UNSW -9V Check | |
| Measurement Point | Pin ③ of CN305 on DT-63 board |
| Specified Value | $-8.8 \pm 0.2 \text{Vdc}$ |
| BACK UP 5V Che | ck |
| Measurement Point | Pin ⑦ of CN106 on DT-63 board |
| Specified Value | $5.7 \pm 0.8 \mathrm{Vdc}$ |
| | |

Checking method:

1) Confirm that each voltage is at the specified level.

8-3. SYSTEM CONTROL SYSTEM ADJUSTMENT

8-3-1. Timer Clock Adjustment (FT-37 Board)

| Mode | E-E |
|----------------------|--------------------|
| Signal | Arbitrary |
| Measurement Point | Pin @ of IC002 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | CV001 |
| Specified Value | 1048.58 ± 0.01 kHz |

Note: Perform adjustment after connecting Pin 🚳 and Pin 🗐 of IC002 to GND.



 $1048.58 \pm 0.01 \; \mathrm{kHz}$

Fig. 8-6.

8-4. SERVO SYSTEM ADJUSTMENT

8-4-1. Reel Blas Adjustment (SP-7 Board)

| Mode | Playback (LP mode) |
|----------------------|--------------------|
| Signal | Any tape |
| Measurement Point | TP210 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV209 |
| Specified Value | 21 ± 1 Hz |

8-4-2. REC ATF Level Check (SP-7 Board)

| Mode | E-E |
|----------------------|---------------------------------|
| Measurement Point | Arbitrary |
| Measuring Instrument | TP235 (Pin ⑤ of CN214: REC ATF) |
| Adjustment Element | Oscilloscope |
| Specified Value | 500 ± 50 mVp-p |

Checking method:

1) Confirm that the REC ATF level is $500 \pm 50 \text{ mVp-p}$.

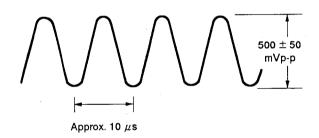


Fig. 8-7.

8-4-3. Drum Free Speed Adjustment (SP-7 Board)

| Mode | Playback (SP mode) |
|----------------------|-------------------------------|
| Signal | Any tape |
| Measurement Point | TP213 (Pin (4) of IC212: ADE) |
| Measuring Instrument | Oscilloscope (DC range) |
| Adjustment Element | RV202 |
| Specified Value | 1.9 ± 0.1 Vdc |

Adjustment method:

1) Adjust RV202 so that the center value of the DC voltage is $1.9\,\pm0.1\,\mathrm{Vdc}.$

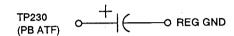
8-4-4. Capstan Free Speed Adjustment (SP-7 Board)

The adjusting element for the LP mode is shown within [].

| Mode | Playback |
|----------------------|--------------------------------|
| Signal | Any tape |
| Measurement Point | TP202 (Pin (3) of IC204: C FG) |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV206 [RV208] |
| Specified Value | 960 ± 1 Hz [480 ± 1 Hz] |

Connections:

1) Connect a capacitor (220 μ F/10V) between TP203 (Emitter of O704: PB ATF) and REG GND.



Adjustment method:

- 1) Use the SP/LP button to set to the SP [LP] mode.
- 2) Set to the play back mode.
- 3) Adjust with RV206 [RV208] to 960 \pm 1 Hz [480 \pm 1 Hz].

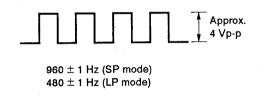


Fig. 8-8.

8-4-5. Switching Position Adjustment (SP-7 Board)

| Mode | Playback |
|----------------------|--|
| Signal | Alignment tape: tracking adjustment (WR5-1NP) |
| Measurement Point | CH1: Pin 4 (RF CH 2) of CN008 on PR-68 board CH2: TP207 (Pin 2) of IC204: SV RF) |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV201 |
| Specified Value | 0 ± 10 μs |

Adjustment method:

 Adjust with RV201 so that the marker of the RF CH 2 waveform is lined up with the falling edge of the RF SWP waveform.

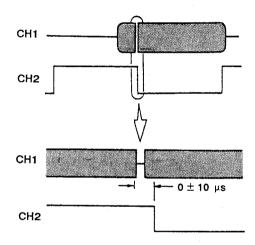


Fig. 8-9. Switching position adjustment

8-4-6. ATF BPF Balance Adjustment (SP-7 Board)

| Mode | Playback |
|----------------------|--|
| Signal | Refer to Fig. 8-10. |
| Measurement Point | TP236 (Pin (9) of IC703: ATF ER) |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV701 |
| Specified Value | Minimum level step in ATF error signal |

Connection 1:

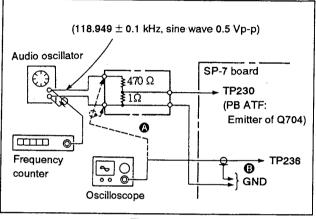


Fig. 8-10.

Connection 2:

1) Connect Pin (5) (P SEL1) of CN012 and Pin (1) (REG 5V) of CN005 using a jumper wire.

Adjustment method:

- 1) Use an oscilloscope to confirm that the sine wave level output from t > audio oscillator is 0.5 Vp-p. (Fig. 8-10. (A))
- Adjust the oscillation frequency of the audio oscillator until the frequency counter indicates 118.949 ± 0.1 kHz.
- 3) Play any tape.
- 4) Connect the oscilloscope to TP236. (Fig. 8-10. **3**)
- 5) Adjust RV701 for the minimum level step in the ATF error signal.

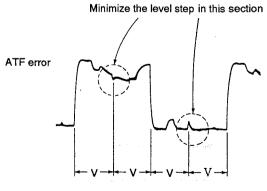


Fig. 8-11.

8-4-7. SLOW Tracking Adjustment (SP-7 Board)

The adjusting element for the LP mode is shown within [].

| Mode | SLOW 1/5 |
|----------------------|--|
| Signal | SP [LP] operation checking tape |
| Measurement Point | TP232 (Pin 23 of IC208: C. ON) |
| Measuring Instrument | Oscilloscope • Trigger mode: NORMAL • Trigger slope: + |
| Adjustment Element | Slow/still adjustment buttons (S004 and S005 on PR-12 board) of tuner preset section |
| Specified Value | 38 ± 0.5 ms |

Connections:

Select the test mode by connecting TP001 (Pin (9) of IC001: EMERG OFF) and GND using a jumper wire.

Adjustment method:

- 1) Play the SP [LP] operation checking tape at 1/5 slow speed.
- 2) Adjust to 38 ± 0.5 ms using the slow/still adjustment button. (Perform adjustment in both the SP and LP modes.)

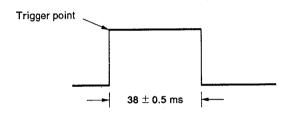


Fig. 8-12.

8-4-8. Tracking Adjustment (SP-7 Board)

| Mode | Playback |
|----------------------|--|
| Signal | Tape with no signal self-recorded in SP mode |
| Measurement Point | Pin ⑦ of CN008 on RP-68 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV210 |
| Specified Value | Maximum RF output |

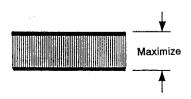


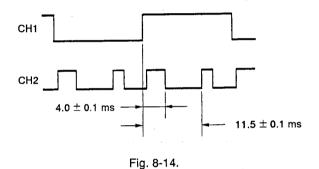
Fig. 8-13.

8-4-9. STILL Adjustment (SP-7 Board)

| Mode | STILL (LP) |
|----------------------|--|
| Signal | Tape self-recorded in LP mode |
| Measurement Point | CH1: TP207 (Pin ② of IC204: SV RF) CH2: TP228 (Pin ⑧ of IC703: ST ID) |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV203, RV204 |
| Specified Value | 1. 4.0 ± 0.1 ms (RV203) 2. 11.5 ± 0.1 ms (RV204) |

Adjustment method:

- 1) Manually rotate the rotor of the capstan motor, and stop at the position where the noise on the monitor screen is hidden at the top or bottom of the screen.
- 2) Adjust by RV203 to 4.0 \pm 0.1 ms. (Refer to Fig. 8-14.)
- 3) Adjust by RV204 to 11.5 \pm 0.1ms (Refer to Fig. 8-14.)



_

8-4-10. FORWARD SLOW Adjustment (SP-7 Board)

The adjusting element for the LP mode is shown within [].

| Mode | FORWARD SLOW |
|----------------------|---------------------------------------|
| Signal | Tape self-recorded in SP [LP] mode |
| Measurement Point | Confirm on monitor TV screen |
| Measuring Instrument | |
| Adjustment Element | RV205 [RV207] |
| Specified Value | No noise or skew on monitor TV screen |

Adjustment method:

1) Adjust with RV205 [RV207] so that the noise on the monitor screen is hidden on the top or bottom of the screen.

8-4-11. SLOW fH Adjustment (SP-7 Board)

1. fH Bias Adjustment

The adjusting element for the LP mode is shown within [].

| Mode | E-E |
|----------------------|-------------------------|
| Signal | No signal |
| Measurement Point | Pin ⑦ of IC219: FH BIAS |
| Measuring Instrument | Digital multimeter |
| Adjustment Element | RV216 [RV215] |
| Specified Value | 2.0 ± 0.1 Vdc |

Adjustment method:

- 1) Set to the SP [LP] mode using the SP/LP button.
- 2) Adjust to 2.0 \pm 0.1 Vdc using RV216 [RV215].

2. SLOW fH Adjustment

The adjusting element for the LP mode is shown within [].

| Mode | FORWARD SLOW |
|----------------------|------------------------------------|
| Signal | Tape self-recorded in SP [LP] mode |
| Measurement Point | Pin ⑤ of CN216: FH |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV218, RV212 [RV217] |
| Specified Value | Minimum shift width of fH pulse |

Connection:

 Select the test mode by connecting TP101 (EMERG OFF) and GND using a jumper wire.

Adjustment method:

 Alternately adjust RV218 and RV212 so that the shift width of the fH pulse is as small as possible.
 [Adjust for minimum shift width of the fH pulse using RV217.]

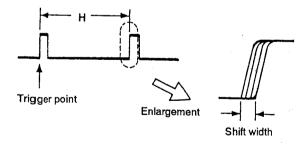


Fig. 8-15.

8-5. VIDEO ADJUSTMENT

As a rule, adjustment of the video system is made in the following order.

The color video signal supplied from the pattern generator is used as the video input signal for adjustment of the video system in the recording mode. Confirm that the sync signal and color burst signal satisfy the specifications designated in the adjustment setup shown in Fig. 8-3.

[Adjustment Method]

- 1) Playback Frequency Characteristics Adjustment
- 2) Flying Erase Check
- 3) X'tal Oscillator fo Adjustment
- 4) Y/C Separation Comb-type Filter Adjustment
- 5) Y Comb-type Filter Adjustment
- 6) SYNC AGC Adjustment
- 7) 31 AMP Gain Adjustment
- 8) VIDEO OUT Level Adjustment
- 9) PB Emphasis Adjustment
- 10) STD Mode PB Y Level Adjustment
- 11) Hi8 Mode PB Y Level Adjustment
- STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
- 13) Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
- 14) 378 fH VCO Adjustment
- 15) Chroma Emphasis fo Adjustment
- 16) Carrier Balance Adjustment
- 17) 1H Comb-type Filter Adjustment
- 18) 2H Comb-type Filter Adjustment
- 19) DC Offset Adjustment
- 20) C Comb-type Filter Cancel Adjustment
- 21) Ys Level Adjustment
- 22) REC Y Level Adjustment
- 23) REC C Level Adjustment
- 24) REC RF Level Adjustment
- 25) D.O.C. Level Adjustment
- 26) Direct Y Signal Level Adjustment
- 27) Direct C Signal Level Adjustment

8-5-1. Playback Frequency Characteristics Adjustment (RP-68 Board)

1. SP playback frequency characteristics adjustment

The adjusting element for CH2 mode is shown within [].

| Mode | Playback |
|----------------------|--|
| Signal | Alignment tape: Frequency characteristics adjustment (WR5-7NE) |
| Measurement Point | Pin ③ of CN008 [Pin ④ of CN008] External trigger: Pin ② (RF SWP) of CN008 Trigger slope: + [-] |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV201 [RV202] |
| Specified Value | 8.5 MHz level is 66% of 2 MHz level |

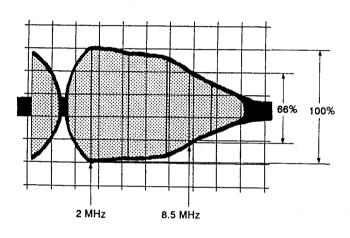


Fig. 5-16.

2. LP playback frequency characteristics adjustment The adjusting element for CH2 mode is shown within [].

| Mode | Playback |
|----------------------|--|
| Signal | Alignment tape: Frequency characteristics adjustment (WR5-7NE) |
| Measurement Point | Pin ⑤ of CN008 [Pin ⑥ of CN008] External trigger: Pin ② (RF SWP) of CN008 Trigger slope: + [-] |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV101 [RV102] |
| Specified Value | 8.5 MHz level is 66% of 2 MHz level |

8-5-2. Flying Erase Check (RP-68 Board)

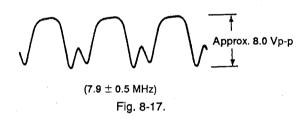
| Mode | REC |
|----------------------|-------------------|
| Signal | Arbitrary |
| Measurement Point | Pin ® of CN001 |
| Frequency Check | |
| Measuring Instrument | Frequency counter |
| SMeasuring | 7.9 ± 0.5 MHz |
| Output Level Check | |
| Instrument | Oscilloscope |
| Specified Value | Approx. 8 Vp-p |

Notes: 1) Use MP-type tape.

2) Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) having high input impedance (at least 1 $M\Omega$) and low capacitance (less than 10 pF).

Adjustment method:

1) Confirm the frequency and output level are 7.9 \pm 0.5 MHz and approximately 8.0 Vp-p respectively.



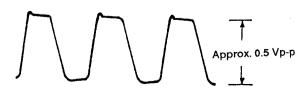
8-5-3. X'tal Oscillator fo Adjustment (CH-44/VI-57 Board)

| Mode | Playback | |
|----------------------|---|--|
| Signal | Alignment tape: operation checking (WR5-4NSP or WR5-5NSP) | |
| Measurement Point | Pin ② on CH-44 board | |
| Measuring Instrument | Frequency counter | |
| Adjustment Element | CV001 on CH-44 board | |
| Specified Value | 3579545 ± 50 Hz | |

Note: Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) having high input impedance (at least $1 \text{ M}\Omega$) and low capacitance (less than 10 pF).

Adjustment method:

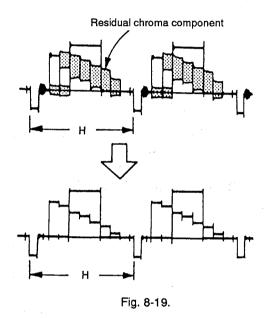
1) Adjust to 3579545 \pm 50 Hz using CV001.



 $(3579545 \pm 50 \text{ Hz})$ Fig. 8-18.

8-5-4. Y/C Separation Comb-type Filter Adjustment (VI-57 Board)

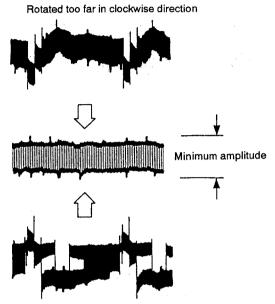
| Mode | E-E | |
|----------------------|---|--|
| Signal | Color bars | |
| Measurement Point | Pin @ of IC201 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | LV201 and RV201 | |
| Specified Value | Minimum chroma component (less than 50 mVp-p) | |



8-5-5. Y Comb-type Filter Adjustment (VI-57 Board)

| Mode | E-E (LP mode) | |
|----------------------|--------------------------------|--|
| Signal | Color bars | |
| Measurement Point | Pin ② of IC201 | |
| Measuring Instrument | Oscilloscope (1: 1 probe used) | |
| Adjustment Element | RV202 | |
| Specified Value | Set amplitude to minimum | |

Note: Be sure to perform adjustment in LP mode.



Rotated too far in counterclockwise direction

Fig. 8-20.

8-5-6. SYNC AGC Adjustment (VI-57 Board)

| Mode | E-E |
|----------------------|-------------------|
| Signal | Color bars |
| Measurement Point | Pin @ of IC101 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV102 |
| Specified Value | 0.50 ± 0.025 Vp-p |

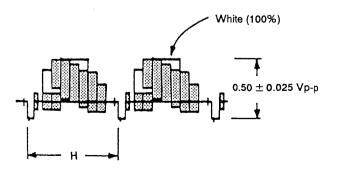


Fig. 8-21.

8-5-7. 31 AMP Gain Adjustment (VI-57 Board)

| Mode | E-E | |
|----------------------|-------------------|--|
| Signal | Color bars | |
| Measurement Point | Pin 🕲 of IC101 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | RV108 | |
| Specified Value | 0.50 ± 0.025 Vp-p | |

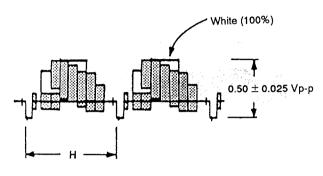


Fig. 8-22.

8-5-8. VIDEO OUT Level Adjustment (VI-57 Board)

| Mode | E-E | |
|----------------------|------------------|--|
| Signal | Color bars | |
| Measurement Point | Pin ⑦ of CN701 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | RV101 | |
| Specified Value | 1.01 ± 0.03 Vp-p | |

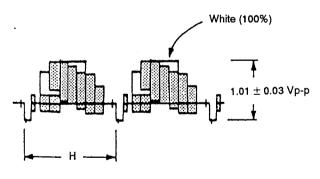


Fig. 8-23.

8-5-9. PB Emphasis Adjustment (VI-57 Board)

| Mode | Playback | |
|----------------------|---|--|
| Signal | Alignment tape: Operation checking (WR5-5NSP or WR5-4NSP) Color bar section | |
| Measurement Point | Pin ⑤ or Pin ⑦ of CN701 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | RV107 | |
| Specified Value | 100% white level is flat | |

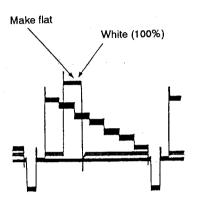


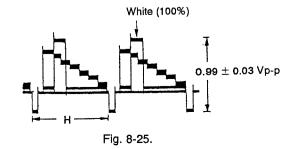
Fig. 8-24.

8-5-10. STD Mode PB Y Level Adjustment (VI-57 Board)

| Mode | Playback | |
|----------------------|---|--|
| Signal | Alignment tape: Operation checking (WR5-5NSP or WR5-4NSP) Color bar section | |
| Measurement Point | Pin ⑤ or Pin ⑦ of CN701 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | RV109 | |
| Specified Value | 0.99 ± 0.03 Vp-p | |

Note: 1) Set the picture quality adjustment knob to the center click position.

2) After adjustment, be sure to perform "8-5-11. Hi8 Mode PB Y Level Adjustment".



8-5-11. Hi8 Mode PB Y Level Adjustment (VI-57 Board)

| Mode | Playback | |
|----------------------|---|--|
| Signal | Alignment tape: Operation checking (WR5-8NSE) Color bar section | |
| Measurement Point | Pin ⑤ or Pin ⑦ of CN701 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | RV110 | |
| Specified Value | 0.99 ± 0.03 Vp-p | |

Note: 1) Set the picture quality adjustment knob to the center click position.

2) Be sure to perform "8-5-10. STD Mode PB Y Level Adjustment" before this adjustment.

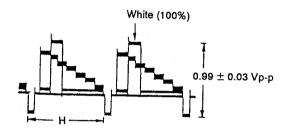


Fig. 8-26.

8-5-12. STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

Note: After adjustment, perform "8-5-13. Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment".

STD mode Y FM carrier frequency adjustment (VI-57 board)

| Mode | E-E | |
|----------------------|---------------------------|--|
| Signal | No signal | |
| Measurement Point | Pin (5) (REC RF) of CN003 | |
| Measuring Instrument | Frequency counter | |
| Adjustment Element | RV605 | |
| Specified Value | 4.40 ± 0.03 MHz | |

Adjustment method:

- 1) Insert an MP-type cassette tape.
- 2) Adjust to 4.40 \pm 0.03 MHz using RV605.
- 3) Perform "2. STD Mode Y FM Deviation Adjustment".



 $4.40\pm0.03~\mathrm{MHz}$

Fig. 8-27.

2. STD mode Y FM deviation adjustment (VI-57 board)

| Mode | REC and playback | |
|----------------------|------------------------------------|--|
| Signal | Color bars | |
| Measurement Point | Pin ⑤ or Pin ⑦ of CN701 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | RV602 | |
| Specified Value | Playback level is 1.00 ± 0.05 Vp-p | |

Note: Perform this adjustment after confirming that "8-5-8. VIDEO OUT Level Adjustment", "8-5-10. STD Mode PB Y Level Adjustment", and "8-5-12. 1. STD Mode Y FM Carrier Frequency Adjustment" have been completed.

Adjustment method:

- 1) Insert an MP type cassette tape.
- 2) Record the color bar signal.
- 3) Playback the recorded signal.
- Check the playback output level.
 Specified value: 1.00 ± 0.05 Vp-p
- 5) If the specified value is not satisfied, rotate RV602 as described below and repeat steps 1) through 3).

| | Rotational direction for RV602 |
|------------------------------|----------------------------------|
| Larger than specified value | Counterclockwise direction (() |
| Smaller than specified value | Clockwise direction (()) |

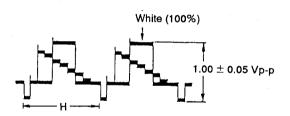


Fig. 8-28.

8-5-13. Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

- Notes: 1) Perform this adjustment after "8-5-11. STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment".
 - 2) Before adjustment, confirm that the Hi8 switch (SW026 on FT-37 board) is set to the AUTO position, and that the connector is attached to the S video terminal (CNJ701 on IO-17 board) of the line input (even when there is no signal).

1. Hi8 mode Y FM carrier frequency adjustment (VI-57 board)

| Mode | E-E |
|----------------------|-------------------|
| Signal | No signal |
| Measurement Point | Pin ⑤ of CN003 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV604 |
| Specified Value | 6.00 ± 0.03 MHz |

Adjustment method:

- Insert an ME-type cassette tape.
- Adjust to 6.00 ± 0.03 MHz using RV604.
- Perform "2. Hi8 Mode Y FM Deviation Adjustment".



Fig. 8-29.

2. Hi8 mode Y FM deviation adjustment (VI-57 board)

| Mode | REC and playback | |
|----------------------|------------------------------------|--|
| Signal | Color bars | |
| Measurement Point | Pin ⑤ or Pin ⑦ of CN701 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | RV601 | |
| Specified Value | Playback level is 1.00 ± 0.05 Vp-p | |

Note: Perform this adjustment after confirming that "8-5-8. VIDEO OUT Level Adjustment", "8-5-11. PB Y Level Adjustment", and "8-5-13. 1. Hi8 Mode Y FM Carrier Frequency Adjustment" have been completed.

Adjustment method:

- 1) Insert an ME-type cassette tape.
- Record the color bar signal.
- Playback the recorded signal.
- Check the playback output level. Specified value: $1.00 \pm 0.05 \text{ Vp-p}$
- If the specified value is not satisfied, rotate RV601 as described below and repeat steps 1) through 3).

| | Rotational direction for RV601 |
|------------------------------|--------------------------------|
| Larger than specified value | Counterclockwise direction () |
| Smaller than specified value | Clockwise direction (()) |

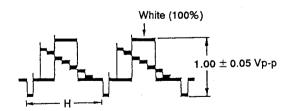


Fig. 8-30.

8-5-14. 378fH VCO Adjustment (CH-44/VI-57 Board)

| Mode | E-E |
|----------------------|--------------------------------|
| Signal | Color bars |
| Measurement Point | Pin 26 of IC001 on CH-44 board |
| Measuring Instrument | Digital voltmeter |
| Adjustment Element | RV001 on CH-44 board |
| Specified Value | $3.00 \pm 0.05 \text{Vdc}$ |

Adjustment method:

1) Adjust to 3.00 ± 0.05 Vdc using RV001.

8-5-15. Chroma Emphasis fo Adjustment (CH-44/VI-57 Board)

| Mode | E-E |
|----------------------|-------------------------------|
| Signal | Color bars |
| Measurement Point | Pin ® of IC002 on CH-44 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | T001 on CH-44 board |
| Specified Value | Minimum chroma component |

Preparations:

- 1) Connect the following two locations using $10 \text{ k}\Omega$ resistors.
 - CH-44 board: Pin @ (ACC) Pin (1) (GND)
 - CH-44 board: Pin @ (ACC) Pin @ (REG 5V)

Adjustment method:

- 1) Adjust T001 for minimum chroma component.
- 2) Remove the $10 \text{ k}\Omega$ resistors after adjustment.

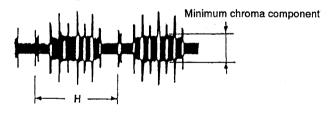


Fig. 8-31.

8-5-16. Carrier Balance Adjustment (CH-44/VI-57 Board)

| Mode | E-E |
|----------------------|--------------------------------|
| Signal | Color bars |
| Measurement Point | Pin 28 of IC001 on CH-44 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV002 on CH-44 board |
| Specified Value | Minimum 4.32 MHz component |

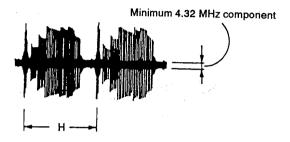


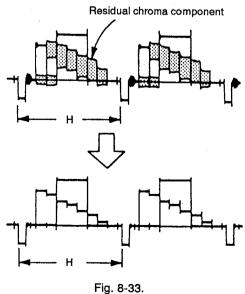
Fig. 8-32.

8-5-17. 1H Comb-type Filter Adjustment (YC-56 Board)

| Mode | E-E |
|----------------------|--|
| Signal | Color bars |
| Measurement Point | Emitter of Q004 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | LV001, RV001 |
| Specified Value | Minimum (less than 20 mVp-p) residual chroma component |

Adjustment method:

Alternately adjust LV001 and RV001 so that there is minimum (less than 20 mVp-p) residual chroma component.



8-5-18. 2H Comb-type Filter Adjustment (YC-56 Board)

| Mode | E-E |
|----------------------|--------------------|
| Signal | Color bars |
| Measurement Point | Emitter of Q014 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | LV002, RV004 |
| Specified Value | Less than 20 mVp-p |

Adjustment method:

1) Alternately adjust LV002 and RV004 to make less than 20 mVp-p.



Fig. 8-34.

8-5-19. DC Offset Adjustment (YC-56 Board)

| Mode | E-E |
|----------------------|--|
| Signal | No signal |
| Measurement Point | +: Emitter of Q025 -: Emitter of Q026 |
| Measuring Instrument | Digital voltmeter |
| Adjustment Element | RV005 |
| Specified Value | 100 ± 20 mVdc |

8-5-20. C Comb-type Filter Cancel Adjustment (YC-56 Board)

| Mode | E-E |
|----------------------|--|
| Signal | All green screen |
| Measurement Point | Emitter of Q302 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV003 |
| Specified Value | Minimize the section shown in Fig. 8-35. |

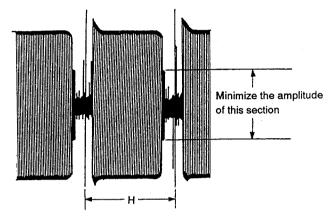


Fig. 8-35.

8-5-21. Ys Level Adjustment (YC-56 Board)

| Mode | E-E | |
|----------------------|-----------------|--|
| Signal | Color bars | |
| Measurement Point | Pin ⑤ of W001 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | RV002 | |
| Specified Value | 0.5 ± 0.02 Vp-p | |

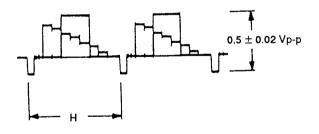


Fig. 8-36.

8-5-22. REC Y Level Adjustment (VI-57 Board)

| Mode | E-E (SP) |
|----------------------|------------------|
| Signal | No signal |
| Measurement Point | Pin ⑤ of CN003 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV501 |
| Specified Value | 0.65 ± 0.02 Vp-p |

- Notes: 1) Before adjustment, be sure to rotate RV502 to set the output to maximum.
 - 2) Be sure to perform "8-5-23. REC C Level Adjustment" and "8-5-24. REC RF Level Adjustment" after this adjustment.
 - 3) Use MP-type tape.

Adjustment method:

- 1) Set to the SP mode using the SP/LP button.
- Adjust to 0.65 ± 0.02 Vp-p using RV501.

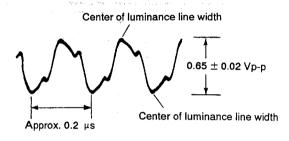


Fig. 8-37.

8-5-23. REC C Level Adjustment (VI-57 Board)

| Mode | E-E (SP) |
|----------------------|-------------------|
| Signal | Color bars |
| Measurement Point | Collector of Q502 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV503 |
| Specified Value | 0.13 ± 0.01 Vp-p |

Note: Use MP-type tape.

Preparations:

- 1) Use jumper wires to make the following three connections.
 - Emitter of Q540 (REC Y)
 - REG 5V (Pin 30 on CH-44 board)
 - Pin ① of W002 (REG AFM) GND
 - Pin (5) of W005 (REG ATF) GND

Adjustment method:

- Set to the SP mode using the SP/LP button. 1)
- Adjust to 0.13 \pm 0.01 Vp-p using RV503.

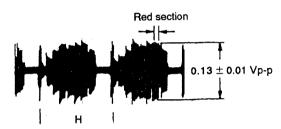


Fig. 8-38.

8-5-24. REC RF Level Adjustment (VI-57 Board)

| Mode | E-E |
|----------------------|---------------|
| Signal | No signal |
| Measurement Point | TP007 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV502 |
| Specified Value | 520 ± 5 mVp-p |

Note: Use MP-type tape.

Adjustment method:

- Set the HI BAND switch (SW026 on FT-37 board) to the OFF position.
- Adjust to 520 \pm 5 mVp-p using RV502.



Fig. 8-39.

8-5-25. D.O.C. Level Adjustment (VI-57 Board)

| Mode | Playback |
|----------------------|---|
| Signal | Self-recording and playback of Hi8 in MPHG tape, and color bars in LP mode. |
| Measurement Point | Pin ③ of Q951 |
| Measuring Instrument | Digital voltmeter |
| Adjustment Element | RV950 |
| Specified Value | 1.70 ± 0.01 V |

8-5-26. Direct Y Signal Level Adjustment (JG-11 Board)

| Mode | Playback pause | |
|----------------------|---|--|
| Signal | Alignment tape: Operation checking (WR5-5NSP or WR5-4NSP) Color bar section | |
| Measurement Point | Pin ② and Pin ⑥ of W204 | |
| Measuring Instrument | Oscilloscope | |
| Adjustment Element | RV201 | |
| Specified Value | Y level difference from playback is 0 ± 0.1 Vp-p at respective measurement points | |



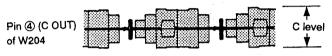
Level difference between playback and pause is less than 0 \pm 0.1 Vp-p



Fig. 8-40.

8-5-27. Direct C Signal Level Adjustment (JG-11 Board)

| Mode | Playback pause |
|----------------------|--|
| Signal | Alignment tape Operation checking (WR5-5NSP or WR5-4NSP) Color bar section |
| Measurement Point | Pin 4 of W204 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV202 |
| Specified Value | C level difference from playback is $0 \pm 0.1 \text{ Vp-p}$ |



Level difference between playback and pause is less than 0 \pm 0.1 Vp-p

Fig. 8-41.

8-6. AUDIO SYSTEM ADJUSTMENTS

 Perform adjustment using the color bar signal as the video signal input.

[Connection of measuring instruments for audio]

In addition to the measuring instruments for the video system, the measuring instruments shown in the figure below are used for the audio system.

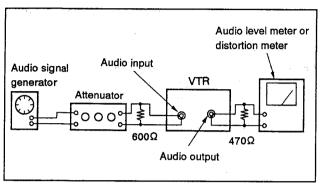


Fig. 8-42.

[Adjustment procedure]

- 1) PCM Master Clock Oscillation Frequency Adjustment
- 2) REC PCM Level Check
- 3) MULTI PILOT Frequency Check
- 4) PCM Playback VCO Free Oscillation Frequency Adjustment
- 5) MULTI PILOT Detector Adjustment
- 6) PCM Playback Level Adjustment
- 7) E-E Output Level Check
- 8) PCM Offset Adjustment
- 9) PCM Recording Level Adjustment
- 10) Overall Frequency Characteristics Check
- 11) Overall Distortion Check
- 12) Overall Noise Level Check

8-6-1. PCM Audio System Adjustment

Unless indicated otherwise, set the VTR switches and controls to the following positions for adjustment.

| Input select switch ····· | LINE |
|---|-------|
| Audio monitor switch (PCM/mix/normal) · · · · · · · · · · · · | |
| REC LEVEL control | . 5 |
| PCM mode switch ····· No | ormal |

Note: The adjusting element for the R channel is indicated in [].

PCM master clock oscillation frequency adjustment (SP-7 board)

| Mode | REC |
|----------------------|-------------------|
| Signal | No signal |
| Measurement Point | Pin ③ of CN601 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV602 |
| Specified Value | 11.45 ± 0.01 MHz |

Adjustment method:

- Connect TP604 (Pin 4) of IC605) and Pin 1 (REG 5V) of CN601 using a jumper wire.
- 2) Adjust to 11.45 \pm 0.01 MHz using RV602.
- 3) Remove the jumper wire.
- 4) Connect TP604 to GND
- Confirm that the frequency is at least 11.63 MHz.

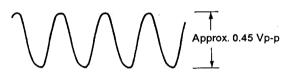


Fig. 8-43.

2. REC PCM level check (SP-7 board)

| Mode | REC |
|----------------------|------------------|
| Signal | No signal |
| Measurement Point | Pin ① of CN607 |
| Measuring Instrument | Oscilloscope |
| Specified Value | Approx. 0.4 Vp-p |

Checking method:

1) Confirm that the REC PCM level is approximately 0.4 Vp-p.

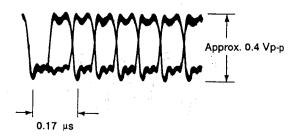


Fig. 8-44.

3. MULTI PILOT frequency check (SP-7 board)

| Mode | E-E |
|----------------------|---------------------|
| Signal | Arbitrary |
| Measurement Point | Pin 🗐 of IC204 |
| Measuring Instrument | Frequency counter |
| Specified Value | 228.748 ± 0.200 kHz |

Checking method:

1) Confirm that the frequency is 228.748 \pm 0.200 kHz.

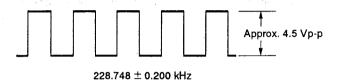


Fig. 8-45.

4. PCM playback VCO free oscillation frequency adjustment (SP-7 board)

| Mode | Playback, FF index search, and REW index search |
|----------------------|---|
| Signal | Any tape |
| Measurement Point | TP603 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV601 (playback) RV604 (FF index search) RV603 (REW index search) |
| Specified Value | 11.58 ± 0.05 MHz (playback) 10.56 ± 0.05 MHz (FF index search) 12.60 ± 0.05 MHz (REW index search) |

Connections:

- Connect TP600 (Pin ① of IC600) and Pin ① (REG 5V) of CN005 using a jumper wire.
- 2) Remove CN607 on the SP-7 board.

Adjustment method:

- 1) Set to the playback mode.
- 2) Adjust to 11.58 \pm 0.05 MHz using RV601.
- 3) Set to the FF index search mode.
- 4) Adjust to 10.56 ± 0.05 MHz using RV604.
- 5) Set to the REW index search mode.
- 6) Adjust to 12.60 \pm 0.05 MHz using RV603.



Fig. 8-46.

5. MULTI PILOT detector adjustment (MK-2/AU-54 board)

| Mode | E-E |
|----------------------|--|
| Signal | No signal |
| Measurement Point | 1. Pin ⑤ of IC801 on MK-2 board 2. Pin ⑥ of IC821 on MK-2 board |
| Measuring Instrument | Frequency counter |
| Adjustment Element | 1. RV801 (SP 1CH) on MK-2 board 2. RV821 (LP 2CH) on MK-2 board |
| Specified Value | 228.748 ± 1 kHz |

Notes: 1) Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) having high input impedance (approx. $10~\text{M}\Omega$) and low capacitance (approx. 10~pF).

2) The adjusting element for LP 2CH is shown in [].

Adjustment method:

- 1) Connect the frequency counter to Pin ⑤ of IC801 [IC821].
- 2) Adjust to 228.748 \pm 1 kHz using RV801 [RV821].

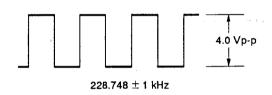


Fig. 8-47.

6. PCM playback level adjustment (AD-12/AU-54 board)

| Mode | Playback |
|----------------------|--|
| Signal | Alignment tape: Operation checking (WR5-5NSP or WR5-4NSP) 400 Hz section |
| Measurement Point | Audio output L and R |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV705 on AD-12 board |
| Specified Value | $-7.5 \pm 0.1 \text{ dBs}$ |

Adjustment method:

1) Adjust to -7.5 ± 0.1 dBs using RV705.

Note: If there is a difference in the levels of the left and right channels, adjust to the center value.

7. E-E output level check

| Mode | E-E |
|----------------------|-------------------------------------|
| Signal | 400 Hz, -7.5 dBs: audio input L [R] |
| Measurement Point | Audio output L [R] |
| Measuring Instrument | Audio level meter |
| Specified Value | $-7.5 \pm 2 \text{ dBs}$ |

Checking method:

- 1) Set the REC LEVEL control to the 5 position.
- 2) Confirm that -7.5 dB is indicated on the REC LEVEL meter.
- 3) Confirm that the audio output L [R] level is -7.5 ± 2 dB.

8. PCM offset adjustment (AD-12/AU-54 board)

| Mode | Self-recording and playback (SP mode) |
|----------------------|--|
| Signal | 400 Hz + 3 dBs |
| Measurement Point | Pin ([Pin ()] on AD-12 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV701 [RV751] on AD-12 board |
| Specified Value | Even clipping above and below waveform |

Adjustment method:

- Perform self-recording and playback, then confirm that there
 is even clipping above and below the waveform.
- 2) If the amount of clipping is not even, rotate RV701 [RV751] as shown below, and confirm 1) again.

| | Rotational direction of RV701 [RV751] as seen from parts side |
|--|---|
| When amount of upper clipping is smaller | Clockwise direction (()) |
| When amount of upper clipping is greater | Counterclockwise direction () |

Note: Adjust RCH and LCH alternately as they will affect each other.

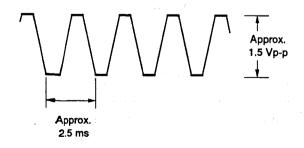


Fig. 8-48.

9. PCM recording level adjustment (AD-12/AU-54 board)

| Mode | Self-recording and playback |
|----------------------|--|
| Signal | 400 Hz, -7.5 dBs: audio input (L and R) |
| Measurement Point | Audio output L [R] |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV703 [RV753] on AD-12 board |
| Specified Value | -7.5 ± 0.5 dBs |

Note: Confirm that "PCM Playback Level Adjustment" has been completed.

Adjustment method:

- 1) Set to the E-E mode.
- Adjust the REC LEVEL control so that the audio output level is -7.5 dBs. (Both left and right channels)
- 3) Record the signal.
- 4) Playback the recorded section.
- 5) Confirm that the audio output L [R] level is -7.5 ± 0.5 dBs.
- 6) If the specified value is not satisfied, adjust with RV703 [RV753] and repeat steps 1) through 5).

10. Overall frequency characteristics check

| Mode | Self-recording and playback |
|----------------------|---|
| Measurement Point | ♠ 400 Hz, -7.5 dBs ₱ 20 Hz, -7.5 dBs ₱ 14 kHz, -7.5 dBs :Audio input L [R] |
| Measuring Instrument | Audio output L [R] |
| Adjustment Element | Audio level meter |
| Specified Value | Confirm that when the 400 Hz playback output level is 0 dB, the 20 Hz playback output level is 0 ± 2 dB and the 14 kHz playback output level is $0 + 2 + 2 = 2$ dB. |

Checking method:

- Adjust the REC LEVEL control so that the audio output L [R] level is -7.5 dBs.
- 2) Record signals (A) through (C) in order.
- 3) Playback the recorded section.
- 4) Confirm that when the 400 Hz playback output level is 0 dB, the 20 Hz playback output level is 0 ± 2 dB and the 14 kHz playback output level is 0 ± 2 dB.

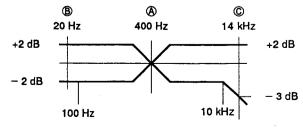


Fig. 8-49.

11. Overall distortion check

| Mode | Self-recording and playback |
|----------------------|-------------------------------------|
| Signal | 400 Hz, -7.5 dBs: Audio input L [R] |
| Measurement Point | Audio output L [R] |
| Measuring Instrument | Distortion meter |
| Specified Value | Less than 0.35% |

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the distortion is less than 0.35%.

12. Overall noise level check

| Mode | Self-recording and playback |
|----------------------|--|
| Signal | No signal (Shorting plug inserted into both audio input L and R terminals) |
| Measurement Point | Audio output L [R] |
| Measuring Instrument | Audio level meter |
| Specified Value | Less than -87.5 dBs *2 |

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the noise level is less than -87.5 dBs.*2
 - *2: Value when IHF-A hearing compensation filter is used.

8-6-2. AFM Audio System Adjustment

Unless indicated otherwise, set the VCR switches and controls to the following positions for adjustment.

[Adjustment Procedure]

- 1) AFM carrier frequency adjustment
- 2) AFM deviation adjustment
- 3) E-E output level check
- 4) Overall level characteristics check
- 5) Overall frequency characteristics check
- 6) Overall distortion check
- 7) Overall noise level check

1. AFM carrier frequency adjustment (AF-20/AU-54 board)

| Mode | REC (SP mode) |
|----------------------|------------------------------------|
| Signal | No signal |
| Measurement Point | Pin (3) on AF-20 board (REC AFM) |
| Measuring Instrument | Frequency counter and oscilloscope |
| Adjustment Element | RV503 on AF-20 board |
| Specified Value | 1500 ± 3 kHz |

Adjustment method:

1) Adjust to 1500 \pm 3 kHz using RV503.

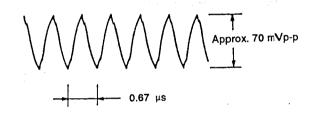


Fig. 8-50.

2. AFM deviation adjustment (AF-20/AU-54 board)

| Mode | Playback |
|----------------------|---|
| Signal | Alignment tape: Operation checking (WR5-4NSP or WR5-5NSP) |
| Measurement Point | Audio output L or R |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV501 on AF-20 board |
| Specified Value | $-7.5 \pm 0.2 \text{ dBs}$ |

Adjustment method:

1) Adjust to -7.5 ± 0.2 dBs using RV501.

3. E-E output level check

| Mode | E-E |
|----------------------|---|
| Signal | 400 Hz, -7.5 dBs: Audio input (Both L and R channels) |
| Measurement Point | Audio output L [R] |
| Measuring Instrument | Audio level meter |
| Specified Value | $-7.5 \pm 2 \text{ dBs}$ |

Checking method:

1) Confirm that the audio output L [R] level is -7.5 ± 2 dBs.

4. Overall level characteristics check

| Mode | Recording (SP mode) |
|----------------------|---|
| Signal | 400 Hz, -7.5 dBs: Audio input (Both L and R channels) |
| Measurement Point | Audio output L or R |
| Measuring Instrument | Audio level meter |
| Specified Value | 7.5 ± 3 dBs |

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the audio output level is -7.5 ± 3 dBs.

5. Overall frequency characteristics check

| Mode | Self-recording and playback |
|----------------------|--|
| Signal | ♠ 400 Hz, -20 dBs ♠ 30 Hz, -20 dBs ♠ 14 kHz, -20 dBs : Audio input (Both L and R channels) |
| Measurement Point | Audio output L or R |
| Measuring Instrument | Audio level meter |
| Specified Value | Confirm that when the 400 Hz playback output level is 0 dB, the 30 Hz and the 14 kHz playback output level is 0 ± 3 dB. |

Checking method:

- 1) Record signals (A) through (C) in order.
- 2) Playback the recorded section.
- 3) Confirm that when the 400 Hz playback output level is 0 dB, the 30 Hz and the 14 kHz playback output level is 0 ± 3 dB.

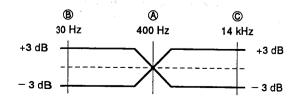


Fig. 8-51. AFM overall frequency response

6. Overall distortion check

The specified value for LP mode is shown in [].

| Mode | Self-recording and playback |
|----------------------|---|
| Signal | 400 Hz, -7.5 dBs: Audio input (Both L and R channels) |
| Measurement Point | Audio output L or R |
| Measuring Instrument | Distortion meter |
| Specified Value | Less than 0.5% [1.0%] *1 |

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the distortion is less than 0.5% [1.0%].*1
 - *1: Value when the filter for distortion measurement is used (Fig. 8-52.). Distortion should be less than 1.0% [2.0%] when the filter is not used.

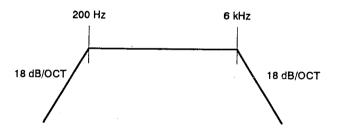


Fig. 8-52. Filter for distortion measuremen

7. Overall noise level check

| Mode | Self-recording and playback |
|----------------------|--|
| Signal | No signal (Shorting plug inserted into both audio input L and R terminals) |
| Measurement Point | Audio output L or R |
| Measuring Instrument | Audio level meter |
| Specified Value | Less than -62 dBs *2 |

Checking method:

- 1) Record the signal.
- 2) Playback the recorded section.
- 3) Confirm that the noise level is less than -62 dBs.*2
 - *2: Value when IHF-A hearing compensation filter is used.

8-7. TURNER SYSTEM ADJUSTMENT

8-7-1. RF AGC Adjustment (TU-82 Board)

| Mode | E-E |
|--------------------|---------------------------|
| Signal | Broadcasting TV signal |
| Adjustment Element | VR upper inside of VIF001 |

Checking method:

- 1) Adjust monitor TV to its maximum contrast and receive broadcasting TV signal.
- 2) Turn the VR so that snow noise becomes appear.
- 3) Turn the VR counterclockwise and set it at a position where snow noise disappears.
- 4) Receive each channel and confirm that there are no beat, picture distortion and snow noise due to inter modulation.

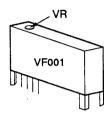


Fig. 8-53.

Connection:

 For adjustment following "1. SAP BPF adjust" and "2. SAP VCO adjustment", first remove the soldering of cut-land and then connect test equipment on as shown below before making the adjustment.

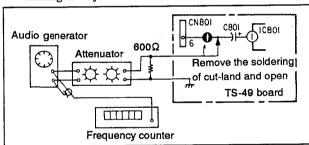


Fig. 8-54.

2) For adjustment following "5. Pilot cancel adjustment" and "6. L-R gain adjustment", first remove the soldering of cut-land then connect test equipment on as shown below before making the adjustment.

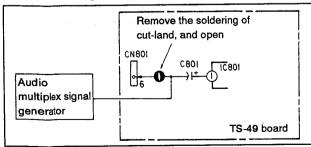


Fig. 8-55.

3) Solder the cut-land after each adjustment in 1) and 2) is completed.

1. SAP BPF adjustment (TS-49 board)

| Mode | E-E | | | | |
|----------------------|---|--|--|--|--|
| Signal | Frequency 62.94 ± 0.1 kHz (sine wave) Level at Pin ① of IC801 0.42 Vp-p (148.5 mVrms) Connection See Fig. 8-54. | | | | |
| Measurement Point | Pin 6 of IC801 | | | | |
| Measuring Instrument | Oscilloscope | | | | |
| Adjustment Element | RV802 | | | | |
| Specified Value | Minimum 62.94 kHz signal level | | | | |

Adjustment method:

- 1) By turning RV802, minimize the 62.94 kHz signal level.
- 2) Reconnect the oscilloscope to Pin ② of IC801.
- 3) After just the input signal frequency to 78.67 ± 0.1 kHz.
- 4) Check to assure the 78.67 kHz signal level at 30 mVp-p or lower.



Fig. 8-56.

2. SAP VCO adjustment (TS-49 board)

| Mode | E-E |
|----------------------|---|
| Signal | Frequency 78.67 ± 0.1 kHz Level at Pin ① of IC801 0.42 Vp-p (148.5 mVrms) Connection See Fig. 8-54. |
| Measurement Point | Pin 🕸 of IC801 |
| Measuring Instrument | Digital voltmeter |
| Adjustment Element | RV803 |
| Specified Value | Va=3.4 ± 0.4 Vdc Vb=Va ± 0.1 Vdc |

Adjustment method:

- 1) Connect the negative side of C801 to GND with a jumper wire.
- 2) Check that the voltage (Va) is 3.4 ± 0.4 Vdc.
- 3) Remove the jumper wire, and input the signal.
- 4) Adjust RV803 so that the voltage (Vb) is $Va \pm 0.1 Vdc$.

3. SAP Variable de-emphasis adjustment (TS-49 board)

| Mode | E-E |
|----------------------|--|
| Signal | Frequency 1. 300 Hz (sine wave) 2. 8 kHz (sine wave) Level at C751 negative side 123.3 dBs (53 mVrms) 216.2 dBs (120 mVrms) Connection See Fig. 8-57. |
| Measurement Point | Pin ⑤ of IC850 |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV752 |
| Specified Value | 1. Va=-23 ± 6dBs 2. Vb=Va-11.3 ± 0.3 dBs |

Connection:

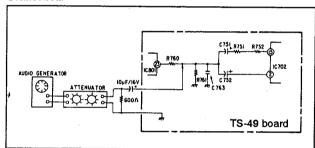


Fig. 8-57.

Adjustment method:

- 1) Supply the 300 Hz, -23.3 dBs signal to C751 negative side.
- 2) Set RV752 mechanical center.
- 3) Check that the 300 Hz level (Va) of Pin (5) of IC850 is -23 ± 6 dBs.
- Supply so that the 8 kHz, -16.2 dBs signal to C751 negative side.
- 5) Adjust RV752 so that the 8 kHz level (V6) of Pin 5 of IC850 is Va-11.3 \pm 0.3 dBs.
- 6) Remove the jumper wire.

4. STEREO VCO adjustment (TS-49 board)

| Mode | E-E |
|----------------------|--|
| Signal | None (Connect the negative side C801 to GND with a jumper wire.) |
| Measurement Point | Junction of RV805 and R814 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV805 |
| Specified Value | 62.94 ± 0.1 kHz |

Note: Connect the frequency counter with a probe having high input impedance and low capacity.

Adjustment method:

1) By turning RV805, attain a 62.94 ± 0.1 kHz counter output.

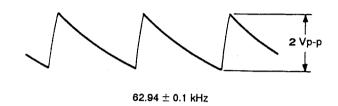


Fig. 8-58.

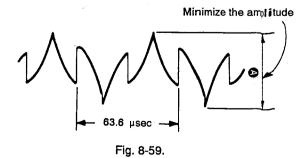
5. Pilot cancel adjustment (TS-49 board)

| Mode | E-E |
|----------------------|---|
| Signal | Stereo pilot signal (15.734 kHz) only. • Connection See Fig. 8-55. • Level at Pin ① of IC801 0.14 Vp-p (49.5 mVrms) |
| Measurement Point | Pin @ of IC801 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV804 |
| Specified Value | Minimum residual pilot signal |

Adjustment method:

1) By turning RV804 minimize the residual Pilot signal evel.

Note: The "STEREO" indicator on the front panel should have been turned on.



6. L-R gain adjustment (TS-49 board)

| Mode | E-E | | | | |
|----------------------|--|--|--|--|--|
| Signal | MPX signal: See Table Connection: See Fig. 8-55. | | | | |
| Measurement Point | Pin 20 of IC801 | | | | |
| Measuring Instrument | Audio level meter | | | | |
| Adjustment Element | RV806 | | | | |
| Specified Value | 375 ± 10 mVrms | | | | |

| Signal | Modulation | Signal Level at Pin ① of IC801 | | | |
|-------------------------------------|-------------|-----------------------------------|--|--|--|
| Stereo Pilot Signal (15.734 kHz) | ON | 1.4 Vp-p (495 mVms) | | | |
| Sub-Channel Signal | 300 Hz 100% | 1.4 Vp-p | | | |

Adjustment method:

1) By turning RV806, adjust the 300 Hz signal level to 375 \pm 10 mVrms.

7. MPX input level adjustment (TU-82 board)

| Mode | E-E |
|----------------------|---|
| Signal | 1 kHz, 100% MOD (± 25 kHz dev) See Fig. 8-60. |
| Measurement Point | Pin ① of IC801. |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV002 |
| Specified Value | 0.70 ± 0.03 Vp-p |

Connection:

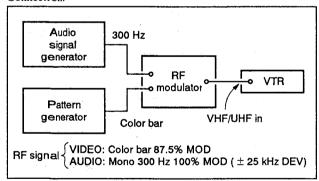


Fig. 8-60.

Adjustment method:

1) Adjust RV002 so that the 300 Hz signal level is 0.70 ± 0.03 Vp-p.

8. Separation adjustment (TS-49 board)

| Mode | E-E |
|----------------------|--|
| Signal | MPX signal: See Table Connection: See Fig. 8-61. |
| Measurement Point | Pin ② of IC801 (Rch OUT) Pin ③ of IC801 (Lch OUT) |
| Measuring Instrument | Headphones or Oscilloscope |
| Adjustment Element | RV702, RV806 |
| Specified Value | Minimum crosstalk |

| Signal | Modulation |
|---------------------|-------------------------------------|
| Stereo Pilot Signal | ON |
| Main Channel Signal | Lch: 400 Hz, 30% Rch: 2 kHz, 30% |
| Sub-channel Signal | NOISE REDUCTION: ON PREEMPHASIS: ON |

Connection:

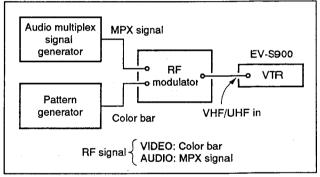


Fig. 8-61.

Adjustment method:

- Adjust with RV806 so that 2 kHz component of Pin@823@ of IC801 becomes minimum.
- 2) Adjust with RV702 so that 400 Hz component of Pin ② of IC801 becomes minimum.
- 3) Repeat step 1) once again.

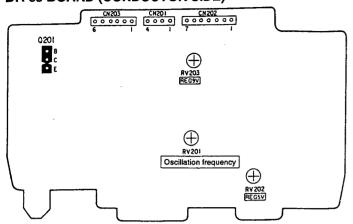
Note: Be sure to perform adjustment 1) again finally.

8-8. ADJUSTMENT RELATED PARTS ARRANGEMENT DIAGRAMS Note: Parts enclosed in dotted lines are parts on the opposite side of the board. SP-7 BOARD (COMPONENT SIDE) DR-35 BOARD (CONDUCTOR SIDE) CN5 PCM master clock CN607 RV604 →⊕ RV602 🕀 8 C E RV 203 RE CSV 7 IC605 (--⊕RV603 1 210219 O TP603 PCM playback VCO free oscillation frequency Oscillation frequency Reel bias DT-63 BOARD (CONDUCTOR SIDE) 00000000 000 CN 105 Switching position fH bias SP mode CN216 RV2I5 fr bias FT-37 BOARD (COMPONENT SIDE) LP mode TP235 O CN12 0704 VI-57 BOARD (COMPONENT SIDE) RP-68 BOARD (COMPONENT SIDE) LP playback frequency response SP playback frequency response REC C level 0302 RV502⊕ RV50I⊕ REC RF level REC Y level CH-44 BOARD (COMPONENT SIDE) RV002 Y/C separation comb-type filter RY001 3781H VC0 1001 Carrier balance Chroma emphasis fo 1C002 CVOOL ⊕RV202 Crystal oscillation fo Y comb-type filter 337 -338 -

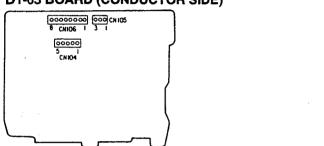
8-8. ADJUSTMENT RELATED PARTS ARRANGEMENT DIAGRAMS

Note: Parts enclosed in dotted lines are parts on the opposite side of the board.

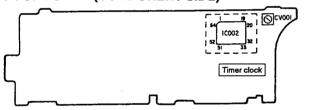
DR-35 BOARD (CONDUCTOR SIDE)



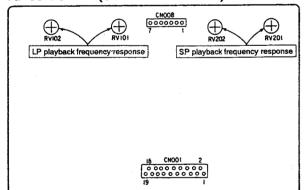
DT-63 BOARD (CONDUCTOR SIDE)



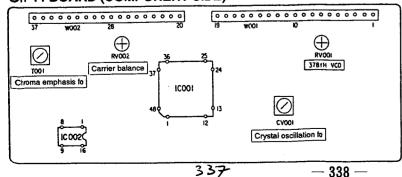
FT-37 BOARD (COMPONENT SIDE)



RP-68 BOARD (COMPONENT SIDE)

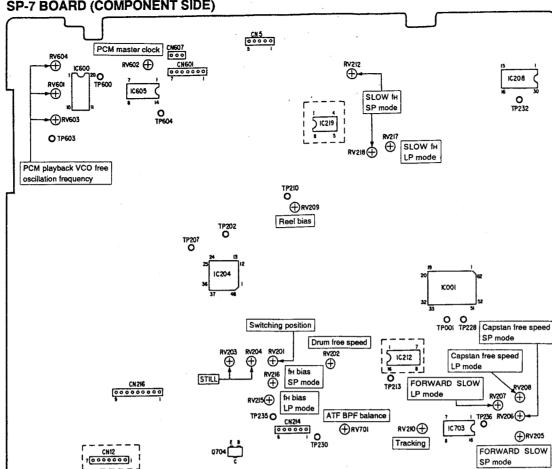


CH-44 BOARD (COMPONENT SIDE)

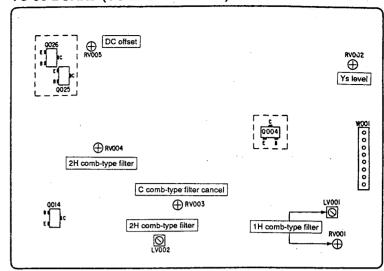


-338

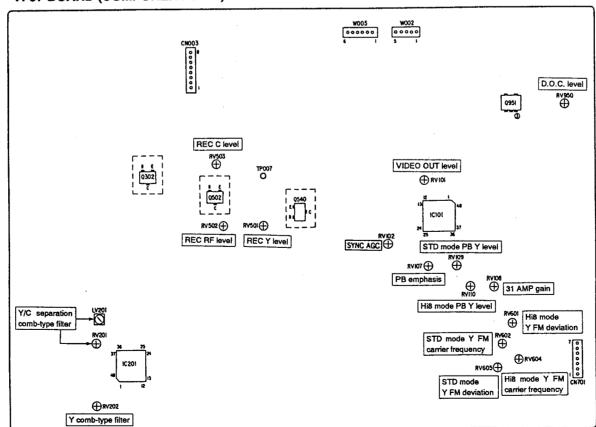
SP-7 BOARD (COMPONENT SIDE)



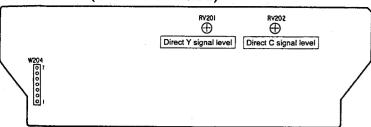
YC-56 BOARD (COMPONENT SIDE)



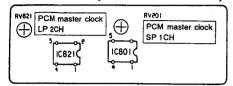
VI-57 BOARD (COMPONENT SIDE)



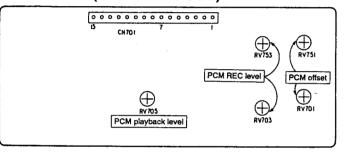
JG-11 BOARD (COMPONENT SIDE)



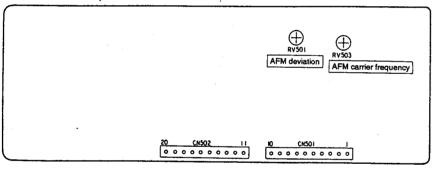
MK-2 BOARD (CONDUCTOR SIDE)



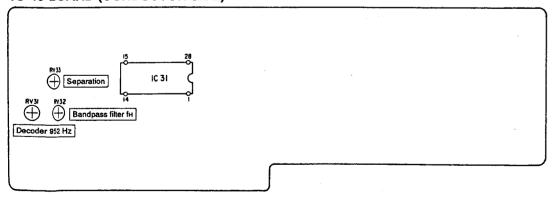
AD-12 BOARD (COMPONENT SIDE)



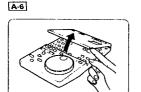
AF-20 BOARD (CONDUCTOR SIDE)

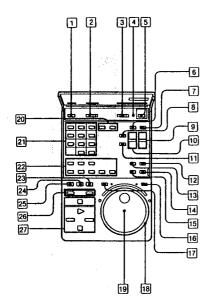


TS-49 BOARD (CONDUCTOR SIDE)



1. FUNCTION OF CONTROLS





The part of the state of the st

Remote Commander RMT-424 A-6

The buttons without the * mark have the same function as the buttons on the VCR with the similar name or mark.

The buttons with an orange dot can be used to operate Sony TVs having a mark.

- 1 OPEN/CLOSE button
- 2 Command mode selector*
- 3 Remote control TV/VTR selector
- 4 Transmitting Indicator*

Lights when any button on the Commander is pressed.

- 5 POWER switch
- 6 MUTING button*

Press to mute the sound. Press again to restore it.

- 7 TV/VTR button
- 8 DISPLAY button*

Press to retain the on-screen display. Press again to extinguish it.

- 9 TRACK/CH (channel) +/- button
- 10 VOL (volume) +/- buttons*
- 11 SLEEP button
- 12 COUNTER RESET button
- 13 COUNTER/REMAIN button
- 14 SYNCHRO EDIT button
- 15 AUDIO DUB button
- 16 TRACK/CH/INDEX button and indicator*

Press when using the JOG dial for digital multi audio track, channel or index number selection.

- 17 JOGSHUTTLE mode button and lamp*

 Press when using the JOG dial and SHUTTLE ring for various speed playback.
- 18 SHUTTLE ring
- 19 JOG dial
- 20 INDEX MARK/ERASE button
- 21 Number buttons*
- 22 Various speed playback buttons*

►I⊲ (still picture), <11/11► FRAME (frame-by-frame picture), x1/10/x1/5 (slow motion picture), x1 (normal speed picture), x2 (double speed picture), SCAN (for picture search)

23 AUTO PB (automatic playback) button

Press to play back a tape automatically from the beginning of the tape after rewinding.

- 24 TAPE RETURN button
- 25 INDEX button
- 26 REC (recording) buttons

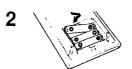
To start recording, press these buttons simultaneously.

27 Tape transport buttons

2. REMOTE COMMANDER SET-UP

B-1





Inserting batteries [55]

- 1 Open the lid.
- 2 Insert two size AA (R6) batteries with correct polarity and close the lid.

Battery life

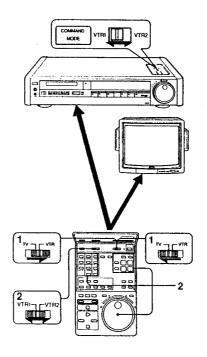
In normal operation, batteries will last for about three months. When the batteries are exhausted, the JOG dial and SHUTTLE ring on the Commander will not function, and then the indicator will not light when any button on the Commander is pressed.

If the Commander is not to be used for a long period of time

Remove the batteries to avoid possible damage from battery leakage.

3. TO CONTROL THIS VTR

B-2



Operation B2

To operate a VCR

- 1 Set TV/VTR to VTR.
- 2 Set the command mode selector to the same position as that of the command mode selector of the VCR.
- 3 Press the required buttons or turn the JOG dial or SHUTTLE ring.

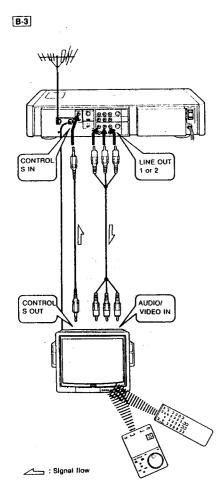
To operate a Sony remote control TV

The Sony TVs with a mark can be operated with this Commander.

- 1 Set TV/VTR to TV
- 2 Press the required buttons or turn the JOG dial or SHUTTLE ring. The buttons marked with an orange dot can be used.
- To use the JOG dial and SHUTTLE ring on the Commander • When using JOG for track number, channel or index number selection, press TRACK/CH/INDEX so that the associated indicator tights.
- When using JOG or SHUTTLE for various speed playback, press JOGSHUTTLE so that the associated indicator lights.
- After using JOG and SHUTTLE, press the same button again to turn off the indicator. The indicator will go out automatically in about 1 minute without pressing the button.

- 343

4. TO CONTROL OTHER SONY VIDEO EQUIPMENT OR TV



To remotely control two VCRs (this unit and another VCR)

If another VCR is equipped with a command mode selector

To avoid having this VCR and the other equipment functioning simultaneously, set COMMAND MODE on this VCR to the different command mode position from the command mode on the other VCR. Simply by switching the command mode selector on the Commander, you can control two VCRs separately.

If another VCR is not equipped with a command mode selector

Set the command mode selector on the Remote Commander as follows:

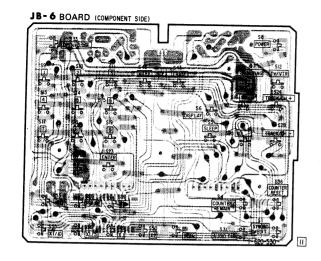
VTR1: for Sony Beta format VCRs VTR2: for Sony 8 mm format VCRs

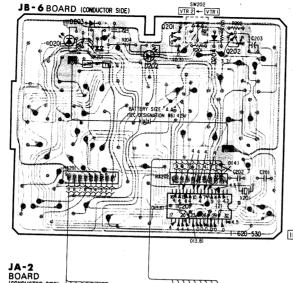
If another VCR is equipped with a CONTROL L Jack With control L connection you can remotely control the other VCR by pointing the Commander to this VCR.

To remotely control this unit through the other equipment B-3

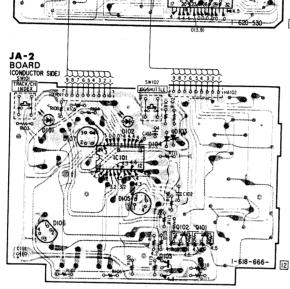
If your TV or TV tuner is equipped with a CONTROL S output, you can operate this unit by pointing the Commander equipped with this unit by the TV toward the TV or TV tuner. This is convenient when the two units are located apart from each other.

5. PRINTED WIRING BOARDS





JA-2 BOARD (COMPONENT SIDE)



Note:

 $\bullet \ \bigcirc - \ :$ indicates a lead wire mounted on the component side.

• • : indicates a lead wire mounted on the conductor side.

: Through hole.

: Pattern from the side which enables seeing.

• Pattern of the rear side.

• Carbon pattern.

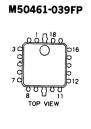
Caution:

Pattern face side: Parts on the pattern face side seen from (Conductor Side) the pattern face are indicated.

Parts face side: Parts on the parts face side seen from

(Component Side) the parts face are indicated.

• SEMICONDUCTORS



2SA1048-GR 2SA1115 DTA144ES



2SC2673

GP2509



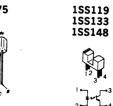
SLR932A

μPD7556G-506





2SA1175

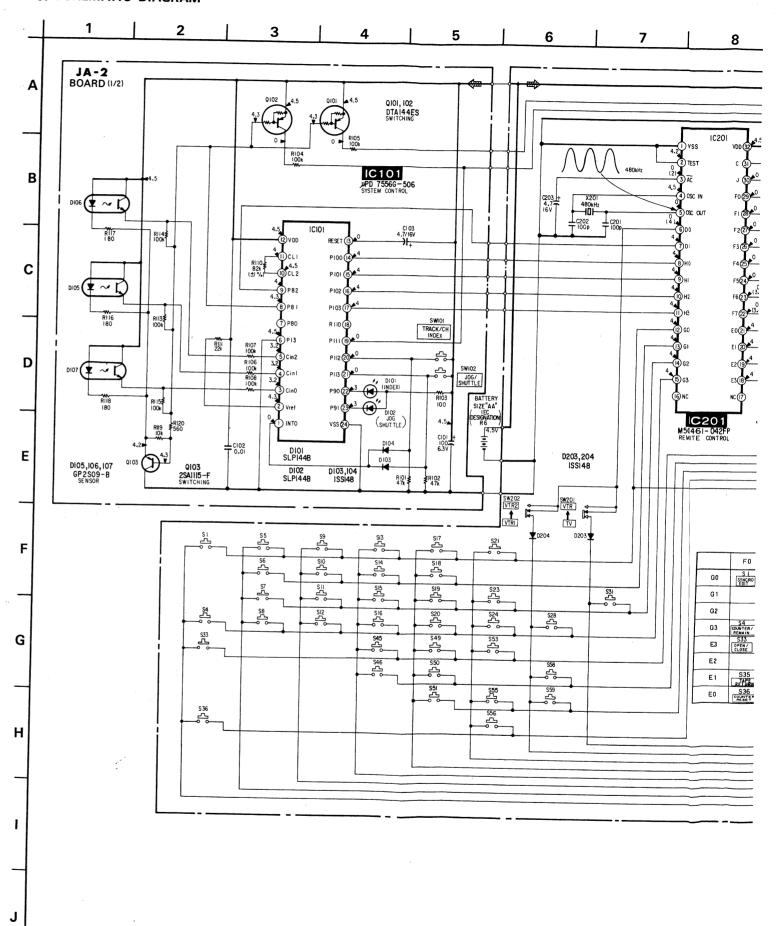


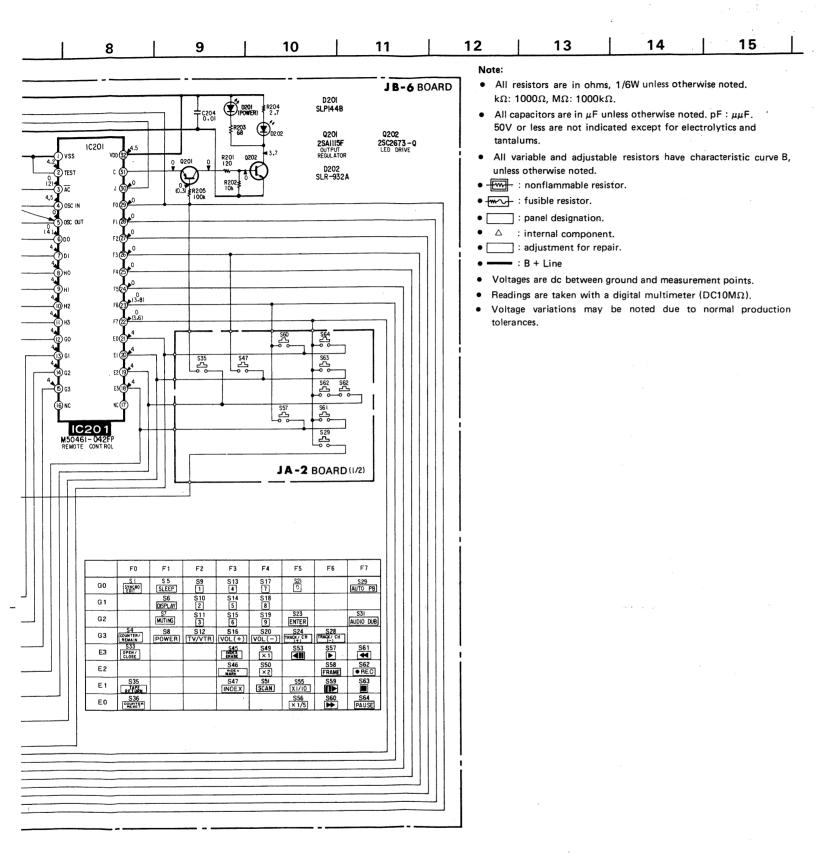
SLP144B



-345-

6. SCHEMATIC DIAGRAM

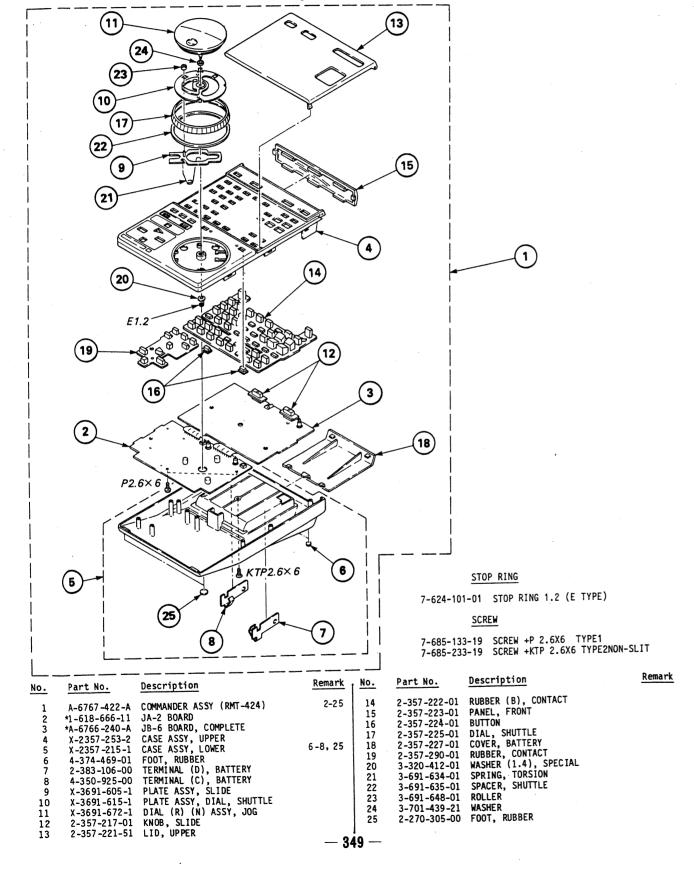




7. EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.



JA-2 JB-6

8. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- RESISTORS
 All resistors are in ohms.
 METAL: Metal-film resistor
 METAL OXIDE: Metal Oxide-film
 resistor

F: nonflammable

 Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items. -XX, -X, mean standardized parts, so they may have some difference from the original one.

SEMIDONDUCTORS

In each case, U: μ, for example:
UA. . .: μA. . ., UPA. . .: μPA. . .,
UPB. . .: μPB. . ., UPC. . .: μPC. . .,

UPD...: μPD...

MF: μF, PF: μμF

COILS

MMH: mH, UH: μH

| Ref.No | Part No. | Description | | | | Remark | Ref.No | Part No. | Descripti | <u>on</u> | | | Rema |
|------------------------------|--|--------------------------------------|---------------------------|----------------------|------------------------------|-------------|------------------------------|--|--------------------------|--------------------------|----------------------|------------------------------|------------|
| | *1-618-666-11 | JA-2 BOARD | | | | | | *A-6766-240-A | JB-6 BOAI | | | | |
| | CAP | ACITOR | | | | | | 2-357-218-01 2-357-219-01 | | | | | |
| C101 C102 | 1-124-225-00 1-161-051-00 | | 100MF 0.01MF | | 20% 10% | 6.3V 25V | | | ACITOR | | | | |
| C103 | 1-124-245-00 | | 4.7MF | | 20% | 16V | 0001 | 1-102-973-00 | CEDAMIC | 100PF | | 10% | 50V |
| | <u>D10</u> | DE | | | | | C201 C202 C203 | 1-102-973-00 1-102-973-00 1-124-245-00 | CERAMIC | 100PF 4.7MF | | 10% | 50V 16V |
| D101 D102 | 8-719-901-44 8-719-901-44 | | | | | | C204 | 1-161-051-00 | | 0.01MF | | 10% | 25V |
| D103 | 8-719-911-19 | NTONE 155119 | | | | | | DIC | DE | | | | |
| D104 D105 D106 D107 | 8-719-911-19 8-719-939-11 8-719-939-11 8-719-939-11 | DIODE 1SS119 GP2S09-B GP2S09-B | | • | | | D201 D202 D203 D204 | 8-719-901-44 8-719-912-39 8-719-911-19 8-719-911-19 | DIODE SLR- DIODE 1SS: | -932A 119 | | | |
| | IC | | | | | | | <u>1C</u> | | | | | |
| IC101 | 8-759-111-60 | IC UPD7556G- | 506 | | | | IC201 | 8-759-603-88 | IC M50461 | -042FP | | | |
| | TRA | NSISTOR | | | | | | TRA | NSISTOR | | | | |
| Q102 | 8-729-900-65 8-729-900-65 8-729-611-53 | TRANSISTOR D | TA144ES | 5 | | | Q201 Q202 | 8-729-204-83 8-729-967-32 | | | GR | | |
| QIOS | | | JAIIIJ- | • | | | | RES | ISTOR | | | | |
| | RES | ISTOR | | | | | R201 | 1-249-406-11 | CARBON | 120 | 5% | 1/4W | |
| R101 R102 R103 R104 | 1-249-437-11 1-249-437-11 1-249-405-11 1-249-441-11 | CARBON CARBON | 47K 47K 100 100K | 5% 5% 5% 5% | 1/4W 1/4W 1/4W 1/4W | | R202 R203 R204 R205 | 1-249-429-11 1-249-403-11 1-249-452-11 1-249-441-11 | CARBON CARBON | 10K 68 2.7 100K | 5% 5% 5% 5% | 1/4W 1/4W 1/4W 1/4W | |
| R105 | 1-249-441-11 | | 100K | | 1/4W | | | SWI | тсн | | | | |
| R106 R107 R108 | 1-249-441-11 1-249-441-11 1-249-441-11 | CARBON | 100K 100K 100K | 5% | 1/4W 1/4W 1/4W | | SW201 SW202 | 1-553-977-00 1-553-977-00 | SWITCH, SI | LIDE LIDE | | | |
| R110 R111 | 1-215-467-00 1-249-433-11 | | 82K 22K | 1% 5% | 1/6W 1/4W | | | CRY | STAL | | | | |
| R113 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | | X201 | 1-527-476-00 | OSCILLATO | R, CERAMIC | (480 | OKHZ) | |
| R114 | 1-249-441-11 | | | 5% | 1/4W | | | ***** | ****** | ****** | **** | ***** | **** |
| R115 R116 | 1-249-441-11 | | 100K 180 | 5% 5% | 1/4W 1/4W | | | | | | | | |
| R117 | 1-249-408-11 | | 180 | 5% | 1/4W | | | | | | | | |
| R118 | 1-249-408-11 | | 180 | 5% | 1/4W | | | | | | | | |
| R119 R120 | 1-249-429-11 1-249-414-11 | | 10K 560 | 5% 5% | 1/4W 1/4W | | | | | | | | |
| | SWI | тсн | | | | | | | | | | | |
| | 1-553-856-00 1-553-856-00 | | | | | | | | | | | | |



SONY. SERVICE MANUAL

US Model Canadian Model

CORRECTION-1

Please correct your service manual.

The head cleaning tape (V8-6CHSP) shown below is not provided.

Page 262

ACCESSORIES AND PACKING MATERIALS

| Part No. | Description | Remark |
|---|---|--------|
| A-6767-422-A 1-417-139-11 1-513-379-00 1-551-086-31 1-558-076-41 | COMMANDER ASSY (RMT-424) MATCHING TRANSFORMER, ANTENNA CONVERTER (EAC-25) (CND) CORD, CONNECTION CORD, CONNECTION | (us) |
| 1-558-543-11 1-559-457-11 *3-677-503-00 *3-713-408-01 *3-713-465-01 | CORD, CONNECTION CORD, CONNECTION SHEET, PROTECTION CASE, ACCESSORY LID, ACCESSORY CASE | |
| 3-786-709-21 | CUSHION (UPPER) CUSHION (LOWER) INDIVIDUAL CARTON MANUAL, INSTRUCTION MANUAL, INSTRUCTION (CND) | |
| - 8 - 883 - 112 - 29 | V8-6CLHSP | |